

ECHO IRELAND

Journal of the
Irish Radio Transmitters Society
December 2009



Lifeboats

Clifden Beach
lifeboat station

EI185RNLI



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News Bulletins and Readers

Sunday				
Dublin	1100	7.055	SSB	Colm EI3H, Sean EI7CD, Gerry EI8CC, Roland EI4GYB Ger EI4GXB
Wicklow	1130	3.680	SSB	(as Gaeilge) Paddy EI7GK, Danny EI6GS
Dublin	1145	145.525	FM	Tony EI5EM, John EI7JG
Dublin	1200	3.650	SSB	As 1100
Mayo	2000	145.600	FM	John EI7IQ, Padraic EI9JA, Jimmy EI2GCB
Tipperary	2030	145.450	FM	Tommy EI2IT, John EI2JB, Andy EI5JF
Dublin	2130	145.525	FM	As 1145
Monday				
Cork	2000	145.750	FM	Vincent EI7HN
Limerick	2000	145.725	FM	Brian EI9AL, Tony EI2AW
Louth	2000	145.675		Peter EI4HX, Thos EI2JD
Galway	2000	145.625		Steve EI5DD
Tuesday				
Waterford	2130	145.650	FM	Francis EI5GOB

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Committee Members 2009/10

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**Newsletter input to
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A Message from the President

Paul Martin EI2CA



It was a great honour for me to be elected President of the Society at the last AGM. I was licensed forty years ago in 1969 and joined the Society a few years before.

Radio has therefore been an important part of my life and I still get the same thrill when I work 'a new one' or put out the first CQ from a new square or country or when the new antenna put together from what could be found in the shack turns out to be a winner.

My journey through this world of radio has led me down many varied roads which in itself emphasises the diversity of our scientific hobby. Initially there was some homebrew, by necessity, since commercial rigs were expensive. Then the fascination of experimenting with different antennas, fostered by the great Con 9 Victor. Con nurtured my interest in antennas and propagation and was always on hand to encourage pushing out the boundaries and trying something new.

When my interest turned to VHF DXing, Albert 6AS was there to advise and suggest ways to improve equipment to work that bit further.

I spent about ten years doing some serious 4 and 2 metre DXing including a lot of Meteor Scatter work using high speed CW and SSB (this was before digimodes).

On MS very accurate timekeeping is essential. In those days I used to ring the speaking clock to check my timepiece, "at the tone the time will be nine, twenty three and six seconds" In the middle of one night I rang the speaking clock to be answered by a...human with a deep Dublin accent (they were doing an equipment service)....What do you want?...the time please.... Its ten to two...no I need the exact time...like the seconds and a tone... (he thought I was messing)...why?....well there's this guy in Russia who is sending me radio signals by bouncing them off the trails of meteors and he knows the exact time and I need to know it too so we know when to send and when to listen.....he hung up convinced that I needed serious help....and I never got to work the Russian!

After a few more years my interest turned to HF contesting and DXpeditions. Lately I have taken an interest in AREN, and apart from the satisfaction of participating in the various events

and nets, I am convinced that AREN is an element that the Society needs to embrace and support both as part of our own self training and as a way of promoting ourselves within Government Departments and Agencies.

The challenges of ATV, satellites, microwaves, VLF and others remain for the future, and there is never enough time. But I have no doubt that when I do venture into those fascinating pastures there will again be mentors, fellow EIs, who will be there to advise and encourage.

This is an important role we must all take on board and I would ask you all to look around you and identify some newcomer either to your field or to the interest generally and provide that friendly encouragement. Looking at our membership statistics, which remain healthy thanks to the work of many on the committee, it is still clear that some who pass their exam and even a few who get their licence lose interest after a short time.

I am sure that all that was missing was the gentle push of encouragement from a local mentor and they would be launched on a fascinating journey, just like I was.

So let's all look out for those new operators and make sure that they get welcomed into the community.

Finally, I would like to encourage all members to become involved in the day to day workings of the Society. If everybody does a little rather than expecting a few to do a lot, then we can all feel truly, that it is 'our' Society.

Wishing you and your families a very Happy Christmas and a good New Year.

I hope the big fellow with the white beard brings you lots of sunspots!

Paul Martin EI2CA

80m Counties Contest
January 1st
1400-1700

Cover Pictures

The RNLI station at Clifden from where the Galway VHF Group operated (see page 30)

Charlie EI8JB working portable through a satellite. (See page 26)

Amateur Wins Nobel Prize

George Smith, AA2EJ, was awarded the Nobel Prize in Physics for the invention of an imaging semiconductor circuit - the CCD sensor.

Smith will share the prize money with two other recipients: Charles K. Kao, of Standard Telecommunication Laboratories in the United Kingdom and Chinese University of Hong Kong in Hong Kong, China, and Willard S. Boyle, of Bell Laboratories.

IRTS Callbook 2010

A copy of the printed Call Book 2010 has been posted to all members, including those who receive newsletters by electronic distribution only.

As you may wish to add the Call Book pdf to your collection, the electronic version has been made available on the Electronic Distribution download page which members who have opted for electronic distribution can access.

Ian Morris Memorial Trophy

The South Dublin Radio Club, in honour of the late Ian Morris EI6U, donated the trophy to the Society.

Ian was a member of the committee of the Society for many years and was a very proficient CW, Field Day and contest operator.

The trophy is awarded to the shortwave listener with the highest number of DXCC entities heard in the previous year. The trophy was first awarded in 1989 to David Burt EI982.

It was presented to Brendan Nutley EI1129 at the 2009 AGM in Athlone. (Picture below)



KW Electronics founder passed away

Rowley Shears G8KW who established KW Electronics passed away on Tuesday November 17 at the age of 90

Those Radio Amateurs who joined the hobby in the 1950's or 60's will be familiar with the range of Amateur rigs that KW Electronics produced at the Vanguard Works in Dartford, Kent.

The 1960's saw the widespread adoption of Single Sideband and for many Radio Amateurs their first SSB radio was a KW.

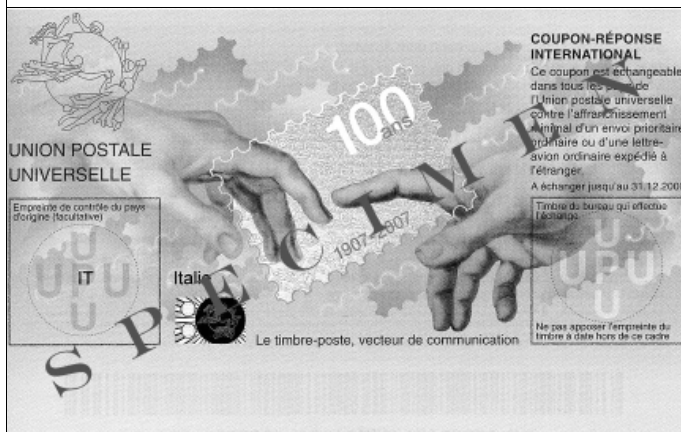
Rowley G8KW will be fondly remembered by users of rigs such as the KW Vanguard, KW Valiant, KW Viceroy, KW Vespa, and KW 2000.

New IRC now in circulation

International Reply Coupons are still widely used to facilitate the exchange of QSL cards by mail and are essential when sending to some countries where it is illegal to send cash by mail.

An Post say they have not sold International Reply Coupons for several years but they will exchange them for the 82c stamp for overseas mail.

Unfortunately there is now a time limit on the validity of IRCs and the current Beijing Model No 2 IRC (pictured below) must be redeemed before December 31, 2009.



It is being replaced with the Nairobi Model IRC which will expire in 2013. (Pictured below)



The Nairobi Model was designed by Rob Van Goor, a graphic artist from the *Luxembourg Post*.

It was selected from among 10 designs presented by Universal Postal Union member countries.

Van Goor interpreted the theme of the contest -- "The Postage Stamp: A Vehicle for Exchange" -- by depicting the world being cradled by a hand and the perforated outline of a postage stamp.

Echo Ireland as PDF.

If you would like to receive Echo Ireland by way of electronic download, and so help to reduce the Society's postage bill, please advise the Membership Records Officer.

Include your call sign and email address in the request, and send it to:

memrecords@irts.ie

Pictures from the Mayo Rally

By Thos EI2JD and Brendan EI1429



Martin Sweeney EI344, Seamus Davey SWL, Joe Flanagan EI5GDB, Michael Cunniff SWL.



Joe SWL and Brendan EI1576



Joe EI3IX, Enda Coffey EI3IS, Steve EI5DD



Gerry EI4GD and Frances EI5J



Thos EI2JD and Declan EI6FR



Pat EI2HX and Ger EI4GXB



Patrick Wayne and Martin Doddy



Tony EI4DIB and Brendan EI1429

EI2GBW – Celebrating the Return of the Cork-Swansea Ferry

Can the return of a ferry service ever be worthy of a special event amateur licence? The answer is yes, if it's a service that is steeped in history like this one.

EI2GBW ('Ireland to GB Wales') was issued in mid-July to celebrate the return of a ferry service linking the city of Cork with South Wales and the UK.

The service began in 1896 and operated almost continuously until it abruptly stopped in 2006, leaving the South-West of Ireland virtually cut-off from the UK.

Other ferry services tend to sail at inconvenient times and involve many hundreds of kilometres of additional driving both



Front of the QSL card inspired by an original 1948 postcard featuring the handsome third *Innisfallen*



The second *Innisfallen*, as she appeared in an advertisement.

in Ireland and the UK.

This was a major blow to local businesses in West Cork and Kerry, which are particularly dependent on tourism, so a campaign began in April 2008 to 'bring back the ferry.'

The instigators of the campaign were John Hosford, a garden-centre owner from Bandon and Adrian Brentnall EI5JV, a stained-glass designer in Ballydehob.



Advertisement for the third *Innisfallen*

The original aim of the campaign was simply to highlight the economic effect that the lack of the ferry was having (estimated at some €55m in lost revenues each year) and to 'embarrass somebody into reinstating it.'

Although the campaign achieved massive publicity, by early 2009 there were still no credible operators that were interested in running this previously profitable ferry link.

It soon became clear that if

the ferry was to sail again, it would be by 'people power' alone. A co-operative was formed that attracted investors both large and small and the depressed shipping market permitted the co-op to purchase a suitable ship for a very reasonable price.

The result: *MV Julia*, currently moored alongside Horgan's Quay in Cork City. The new ferry service between Cork and Swansea to be operated by the co-op's Fastnet Line is due to begin on March 1st 2010.

You might well ask how a ferry service can be considered historic. The answer lies in one word, *Innisfallen*, which rings nostalgic bells with many older residents of Cork and the south coast.

This is the name carried by five successive ferry ships that plied routes between Cork and Fishguard, Pembroke and Swansea beginning in 1896.

For a full history of the various ships called *Innisfallen*, see the excellent website run by Kieran Frost.

Originally it was thought that *Julia* would be renamed and become the sixth *Innisfallen*. This is still a possibility but not a priority.

In anticipation that this might still happen, QSL cards bear the



Fourth *Innisfallen* on her launch day

image of the handsome third *Innisfallen* that first sailed in 1948.

Julia was built in 1982 in Bremerhaven for service in the Baltic Sea. She is a massive 21,699 gross tons, 153m length over all (longer than Croke Park) and has a 20 knot service speed.

She has a passenger capacity of 1,860 and holds 440 cars plus 30 freight vehicles.



MV Julia as she steams up the River Lee to Cork
on 25 September 2009

Following completion of her purchase from Finnish interests, *Julia* arrived in Cork on 25 September to a gala welcome. That day, EI2GBW operated from the AREN trailer located on the quay just a few metres from the ship, and worked about 80 stations despite poor band conditions. Operators were Conor EI4JN, Declan EI9FVB, John EI2GN and Tim EI2KA.

In addition to ongoing operations from several home QTHs and quayside operations during upcoming public days in Cork, EI2GBW will soon be joined by its sister special event station in the UK, GB2EI.

There are also planned maritime mobile operations aboard *Julia* during sea trials and first scheduled sailings using the call sign G2YC/MM.

Any station working all three of the special event and maritime mobile stations will qualify for a commemorative certificate. QSL cards are sent via the bureau to all stations worked. Operations will cease in early April 2010.

Although not yet certain, it is possible that *Julia* will be renamed *Innisfallen*. Whether or not this happens, *Julia* promises a return to the comfort and style of days past and at least in spirit extends the heritage of the venerable name *Innisfallen*.

Tim McKnight EI2KA

¹ See website www.bringbacktheswanseacorkferry.com

² See website www.irish-ferries-enthusiasts.com/innisfallen.php

Galway APRS Digipeater

The Galway VHF Group are delighted to announce that the new Galway APRS Node is now active

The Digipeater is located in Mervue, Galway and has a very good distance view to the horizon. It provides excellent coverage around County Galway and beyond.

The callsign of the APRS node is EI2GCP-2 and this will link into the already established national system. This fills in a large gap that has been present on the western and north-western side of the country.

Brendan, EI6IZ, has kindly offered to link into our APRS node facilitating the north western area to give additional coverage into Co. Mayo and above.

We hope to add the facility of a weather station in the following months which will send its information via beacon text. By checking the data from the weather beacons on the APRS it is possible to form a general synopsis of the weather around the country.

Such information can prove valuable to those active on VHF and more so on Microwaves.

Special thanks to Martin List-Peterson for providing a location for the Digipeater on the roof of his Airwire office building, Gerry EI8DRB, and Enda EI3IX, who finalised the installation of the antenna and associated equipment.

Sadly the transceiver for this project was held up in the post due to the Royal Mail dispute and delayed the project.

To view the activity in Ireland from the internet connect into www.aprs.fi and scroll the map to Ireland.

At present, the bulk of the activity would appear to be in the southern direction and also in the Dublin area.

To view activity from received signals off air, it would be necessary to run the program UIView and have a TNC running in Kiss-Mode to receive the local information.

Further information about the Galway APRS can be obtained from Gerry EI8DRB or Steve EI5DD.

DXCluster for mobile phones

The GB7MBC DXCluster is now available for those of you with mobile smartphones. Web pages have been created to make it simple to use the cluster when mobile.

Although designed for an iPhone, they have been tested on Blackberry, Android and the Nokia N95. It should work with most smartphones. The pages feature filtering and the capability to click on a DX callsign to get the QRZ information for it. The cluster is available at <http://www.gb7mbc.net/webcluster/iPhone.php>

G5RV's 1932 Logbook sells

On October 1st, the 1932 logbook of Louis Varney, G5RV, was put up for auction on eBay.

Within a couple of days the price reached £77 where it stayed for several days. After some intense bidding towards the end the logbook finally sold for £227.

The logbook shows that G5RV's final QSO's were on January 11th 2000. Ironically, the final entries appeared on page 73 of the logbook. Varney was, of course using the G5RV antenna that he designed for those final contacts.

Dayton 2010

Get with the Program

"Amateur Radio Clubs Worldwide, The Lifeline" will be the theme of the 2010 Dayton Hamvention scheduled for next May 14th to the 16th at the O'Hara Arena in Dayton, Ohio.

To help celebrate the world of radio clubs, Hamvention planners are asking for pictures from radio clubs around the world that it can use on the front and back cover of the Hamvention 2010 program magazine.

They are also looking for stories of interest from interesting radio clubs. More details are available at the Dayton site www.hamvention.org



HF Happenings

with Dave Deane EI9FBB

Welcome to the Christmas edition of HF Happenings and a great way to bring the year to an end.

Recapping from the last issue, we had FT5GA, 9G5TT, 3D20CR, K4M, XR0Y, various P29***, 8R1PY, A31A & TX3A to keep us all 'entertained' to say the least. All of these were workable from EI given some patience and even moderately equipped stations should have managed to nab some of these. Pacific paths are still difficult on any given band at the moment, although, certainly not impossible.

Check long path openings in the morning time i.e. up to 10am on 20m & 17m and you could be surprised! Even those with a moderate dipole antenna for 40 & 80m should keep a check on the evening grey-line as this enhancement often gets overlooked or forgotten about.

FT5GA – Glorioso Island seem to have got more than their fair share of criticism during their operation from this rare one which was ranked as #4 on the 2008 DX magazine most wanted list. This was a military based operation and contained 5 operators. Radio was their second obligation; they had other military duties to attend to first. The team had to QRT each day for 2 hours at regular intervals for various maintenances and at times had just one station operational. They were not allowed to install their antennas at the preferred beach location but just had to make do with an alternative, less than ideal, location.

Despite all these obstructions, they still bit their bottom lip just to get this rare one 'aired' and to try to serve the DX community the best they could. After 23 days being on the air, they managed a whopping 50,458 QSOs to 15,253 individual DXers. Of these, 90 QSOs were made into EI and 30 EI's made it into their log. Credit to Thos, EI2JD who topped the poll with 11 band/mode slots. LoTW confirmations for this one have already been made available however, the traditional QSLing process is under way and paper cards should be arriving shortly.

9G5TT – Ghana was another good 'stocking filler' to say the least. This Italian team graced the bands from 13th to 27th November and were easily workable on all bands from EI.

The same team also activated Abokwa Island IOTA AF-084 and signed 9G5XX, although using one single 100W station, were once again managed from EI to please the deserving.

Both of these to be QSL'd via I2YSB via direct only.

6W/EI6DX – Senegal

Keeping it in Africa, I feel that special recognition should be paid to Stan, EI6DX who was QRV as 6W/EI6DX recently. Operating from the small village of Somone (70k Southeast of Dakar) Stan put on a tremendous show and again, was more than workable from EI. I recall working him on 80m where he was a genuine 599 plus 20db!! He certainly put EI back on the map- hi! During his time there, 25 EI's made 39 QSOs between 7th to 16th November. QSL Stan via his manager, RX3RC.

XR0Y, Easter Island graced the bands from 31st October to 15th November and gave many a 'new one'. This international team had to brave harsh wx elements and strong winds that required a lot more unnecessary antenna maintenance. Several items of equipment never arrived with them to the island.

Logging over 22,000 QSOs, 9,531 unique calls were logged of which 24 individual EI's logged 37 QSOs. Recognition this time to Eoin, EI9O & Niall, EI4CF who each made 4 band/mode slots.

QSL info for this one is available at : <http://rapanui2009.org/qsq-info-online-log> where several routes are available.

ZY0T - Trinidad and Martin Vaz Islands were unexpectedly announced giving rather short notice to this 4 man Brazilian team. Operating for 4 days, they logged 6,388 QSOs and again, provided many with a new one. 16 EI's made 29 QSOs and compliments to Nicky, EI9JF who topped the poll this time with 7 band/mode slots.

This operation has already uploaded to LoTW and paper cards should be mailed early in the New Year.

TX3A – Chesterfield Island

At time of writing, TX3A has just gone QRT after almost one month of being isolated on this much wanted one. Chesterfield is currently ranked at #33 on the most wanted list, however, is placed

much higher amongst us Europeans. A two-man duo, HA7RY & AA7JV braved the elements for a period of 27 days and logged an amazing 36,174 unique call-signs. This operation had a major low-band emphasis although they also spent a bit of time on the higher bands, mostly for NA/JA openings.

All QSOs have been uploaded to both LoTW & eQSL and direct QSL requests to be sent to Tomi, HA7RY.

Special recognition to John, EI7BA who logged an amazing 4 bands and even managed a 160m QSO at 16.30pm.

See what I mean about unexplored paths? Hi!

Now onto up and coming announced DXpeditions to keep us occupied during these long, dark and (boring?) winter nights.

TI7XX, San Jose Island, Costa Rica, is NA-191. TI7WGI, DH8WR, DL2JRM and DL3ALF will be there December 30-January 5, operating all the HF bands, they say, on CW, SSB, RTTY and PSK31.

QSL direct or bureau to DL2JRM. <http://ti7.info/index.html>.

PD450OBL, a special call from the Netherlands, November 24-December 20, will mark 450 years of the village Oud-Beijerland. QSL to PD0LDC.

OH9SCL

OH9MM says, "Xmas is coming." and OH9SCL from "Santa Claus Land" will again be active from the Arctic Circle this December. On 160-10m CW, SSB and digital, "Santa's helpers" will include OH3BHL, OH9KL, OH9MDC, OH9MM and OH9RJ. QSL VIA OH9UV. <http://www.qrz.com/db/oh9scl>.

5Z0H in Kenya's Lamu Island, AF-040, Wasini Island, AF-067, and Norok for those needing Kenya on 160 and 80, will be on the air February 10-20. The 5Z4ES team of IK8TEO, IK8UHA and IK8VRH will also be trying to help out a home for abandoned children in Malindi by installing a ham station there, for hams who may want to repeat their experience. IK8VRH says this is why the PTT issued the 5Z0 prefix for the first time and, supposedly, never will again. www.ddxc.it

(Continued on page 9)

(Continued from page 8)

E4X – Palestine is due to be QRV in 2010 for those who may have missed the January E44M operation. This team will be led by EA4RM, Antonio, who recently travelled to Palestine to secure the E4X license. This one will be on 160-6 including 30, 17 and 12, CW, SSB and RTTY with at least 3 simultaneous stations. QSL via EA4RM.

There may be on-line logs during the E4X operation. The dates have not yet been finalized or announced but keep an eye on <http://www.dxfriends.com/e4x/index.php> for latest news and updates.

J6 – St.Lucia

The "Caribbean Buddies 2010 team" go to St. Lucia, J6, February 2-10, 2010 with nine operators. Their QTH is a cliff-top villa and they will operate portable from various spots on the island too, on CW, SSB and digital. Operators are W6HFP, W3FF, NE1RD, WZ1P, WG0AT, KC4VG, N7UN, KB9AVO and K8EAB. They are still working on their licensing but each operator expects to end up with his own call.

QSLing will be by LoTW, eQSL or direct to the individual operators, with SASE required.

French Polynesia

February 9th to 25th are the dates for a low band DXpedition to French Polynesia.

Team members for this one include FO8RZ (F5PHW), Phil; F6BEE, Jacques; G3TXF, Nigel; and VE2TZZ, Gilles. Look for activity on all bands from 1.8 through 28 MHz, with a focus on 160 and 80m.

They will also participate in the CQ World Wide WPX RTTY Contest and the ARRL CW DX Contest.

Plans are to have two complete stations QRV simultaneously. They will be using a 160m inverted L in the ocean or on the beach, a pair of quarter wave verticals on 80m, verticals on 40, 30, 17 and 12m as well as a 5 band Spiderbeam.

The team will also be using a Beverage or K9AY receiving antenna.

No word yet on the call sign(s) but QSLs will go via G3TXF.

The 2010 French Polynesia team has a Web page, thanks to F1JKJ, Laurent, at www.fo2010.org.

S21DX – Bangladesh

The S21RC, S21S and S21D Bangladesh operation to AS-127, St. Martin's Island in the Chittagong Region Group, is set for

February 21-25. The three operators have asked the government for S21DX as their call sign.

St. Martin's is the only coral island belonging to Bangladesh. There is a light-house near where they will be camping and operating. There should be little QRN because there is no electricity or motor vehicles on the island.

They expect to be running two stations, run by a 1 kW generator and a pair of 115 amp-hour batteries.

QSL via EB7DX. Sponsors and funding are still being sought. Here's the web page: <http://iota.s2dx.org>.

H40 – Temoto Province

H40FN is the Temotu Province call sign for DK9FN, DL2GAC and DG1FK on CW. On SSB the call is H40MS.

On digital modes the call is H40FK.

Look for them February 6-19, focusing on 160 and 80 with their "Lobster" 2-element multiband vertical. They will also go to 40 and higher bands.

QSL info: H40FN via HA8FW; H40MS via DL2GAC; H40FK via DG1FK.

A bureau card will go out to everyone who makes a QSO.

If you want it faster you'll need to send \$2 U.S. to cover postage.

Donations are welcomed.

Here's the web site:

<http://hari-ham.com/h40fn>.

J20C – Djibouti

The J20C team, mostly made up of operators from the F6KOP Provins Club and the Clipperton DX Club, had plans to be QRV from Djibouti for an IOTA activation in January 2010.

Says group member F5VHQ, John, "Unfortunately, the Djibouti airline has gone bankrupt and now we are looking for alternatives - most likely not before March, 2010."

This group has been QRV in recent years, typically in January, with call signs TS7C, 5H1C, XT2C and J5C.

When this one does finally get their transportation sorted and gets QRV, another great operation is assured.

More up to date news should be available for next issue.

Dx-pedition planning

Usually, once an unusual or interesting call sign appears on the bands or suddenly pops up on the screen of your DX cluster, it often starts to raise eyebrows.

For many, there is no prior notification or advance warning.

It is worth noting that for many operations, several months or even years of

planning and hard work has gone on in the background without even a sniff or hint of information being released until perhaps just a few weeks before operations begin.

It can take years of persistence for Governing bodies to issue licenses as in the 2006 VU4/VU7 operations for example. If and only when these have been granted, there are other obvious hurdles to overcome before press releases and other media coverage can begin.

The next big step is trying to arrange transport and logistics.

Often a prior site survey has to be undertaken some months in advance as to determine on site location/antennas/safety etc. If it is somewhere remote, there are often restrictions upon licensing approval and landing permits being issued, and usually, these permits are only granted for a set number of days at a particular time of year.

So, in a nut shell, once all these are in place, the actual DXpedition preparations can then begin, often leading to a sudden scurry of preparation with little or no advance notice.

Some DXpeditions currently in the works can not disclose or release dates as these rely solely on these said approvals.

However, KH9, FR/T & KP1 are fighting hard with officials to get these ones permitted during 2010.

Let's keep our fingers crossed that these do materialize this coming year.

EI Activity

Even casual operating in contests can help to build on ones DXCC totals.

One 'seasoned' EI DXer was surprised to work France as a new one on 15m during the recent CQWW CW contest. Often, attention is paid to the 'rare and unusual' ones usually neglecting the obvious!

I myself have just worked #248 on 17m and believe it or not, it was just an Austrian station. None the less, still just as important as something more exotic.

EI is in a strong standing amongst the DX world and activity is increasing across the bands. One comment was passed to me recently regarding the increase of EI activity on 160m where even EI nets take place most evenings.

I have noticed an increase of 'B' calls on the HF bands. Some of these show great operating skills and are getting tremendous results, working some great DX indeed.

It is also noted that some of the more 'newly licensed' are appearing too on the

(Continued on page 10)

(Continued from page 9)

HF bands thus supporting that this is not a dying hobby in EI.

Sure, there have been some legendary EI's through the years, some staggering records have been set and perhaps may never be broken.

There have even been a few characters amongst us who will never be forgotten.

Several EI DXers have made it on the international map and have supported EI with true flying colours.

With the support of the IRTS, the future of Amateur Radio looks bright in EI.

Solar Minimum

Still stuck at solar minimum, 2009 was even a worse year than 2008.

The following has been extracted from Spaceweather.com just before going to print:

The sun is in the pits of a very deep solar minimum. Many researchers thought the sunspot cycle had hit bottom in 2008 when the sun was blank 73% of the time. Not so. 2009 is on the verge of going even lower.

So far this year, the sun has been blank 75% of the time, and only a serious outbreak of sunspots over the next few days will prevent 2009 from becoming the quietest year in a century.

Solar minimum continues." Even with this in mind, remember, it is still possible to work some great DX even at solar minimum.

Several EI DXers have reported working over 250 DXCCs in 2009 alone.

These were spread over all 9 HF bands thus proving that there are still openings on the higher bands.

Even with my own modest set up, I worked 29 zones and 84 DXCCs on 12m this year. Look forward to the year ahead, it can only get better!!

I'd like to take this opportunity to wish you all a very peaceful Christmas and a DXfull New year.

Special thanks to Bernie, W3UR for allowing us to extract valuable information from the pages of 'The Daily DX' for reproduction, for without his help, this feature would not be possible.

See www.dailydx.com for more information or to get a free 2 week trial.

We also hope to be able to publish Joe, W1JR's usual end of year review in the next issue, which generated a lot of interest last year.

Until then, vy 73 es see you all in 2010.
de Dave EI9FBB

CASHOTA - Ireland

Castles and Stately Homes on the Air



In January 2009, the Galway VHF Group launched the Castles and Stately Homes Award. Sadly, to date there has been one activation by Gerry EI8DRB in the form of Oranmore Castle and two other locations in Donegal activated by Chris G4KPT.

The CASHOTA IRELAND website may be found at <http://cashota-ireland.org> where full instructions on "how to go about activating a Castle" may be found. It is not necessary to set up station inside the Castle or Stately Home and operating within 500 yards of the Castle will suffice.

Of course it would be an added bonus if operation were possible from the premises itself.

The CASHOTA Ireland award is available for working or activating 25 Castles in Ireland (EI and GI).

The CASHOTA UK award is available for working 50 castles in the UK and includes operations in EI and GI. The Galway VHF Group plan to activate at least one or two castles a month next year in an effort to get this award off the ground.

Perhaps it may be possible that others may also be interested in taking a trip out for a portable activity for one or two hours on a Saturday or Sunday afternoon.

To obtain a number for a Castle or Stately Home e-mail Steve (EI5DD) at ei5dd.steve@gmail.com

Instructions for Participation

It is essential that the Number for the Castle is obtained before going ahead with an activation as this is required by those claiming the award.

* Email Steve (EI5DD) for an issue number of the castle which you are going to activate.

* Send a picture of the castle along with summarised information and it will be added to the website (castles page) but please make sure you have permission for the picture to be uploaded to the internet.

* Remember to provide the date and times when you plan to activate your castle.

Permission may be required from the owners of the Castles.

Details Required Prior to Activation

1. Castle Name
2. County
3. EI or GI
4. Location
5. WAI Square
6. National Grid Reference
7. Brief History (1 Paragraph)
8. Picture
9. Date of Proposed Activation
10. Name of Person or Group Activating

A minimum of 10 days is required to allow publicity via IRTS news and CASHOTA websites.

Mayo Radio Rally

The Mayo Radio Experimenters' would like to sincerely thank the traders and customers who turned up in Castlebar for the Mayo Radio Rally.

While numbers were slightly down on last year's record high, the huge turnout on the day was totally unexpected given the horrible road and weather conditions.

The door prize, which was sponsored by the Welcome Inn Hotel, was won by Mr. Mark Hillary, of Bearvaish, Rathmuller, Ballymote, Co. Sligo.

There was a great turnout on the Saturday night for the very entertaining and interesting presentation by Declan Craig, EI6FR, and the club wishes to thank Declan and those who attended. The club meets monthly, on the first Wednesday, at 9.30pm in the Welcome Inn Hotel, Castlebar.

IRTS AGM Weekend in Dundalk

April 24/25th 2010



Excerpt from the HX files

A Look at ATV with Pat Fitzpatrick EI2HX - Excerpt 007

Big tools and small tools.

Now that I have got your attention , Hello and welcome to excerpt 007 of the HX-files .

I would like to take some time to talk about some construction tools I have used when making some front panels and/or boxes (and covering my mistakes).

Safety first.

As with all tools you should always take care and wear the appropriate safety gear. Some people may laugh at you , but if anything happened they would be the first to say that you are old enough to know better and you should have worn some safety gear.

What to buy.

What tools to buy when you start on home constructing is a tough one, as with test gear you don't want to spend a fortune on something you only use once in a blue moon.



The first item I bought was a small bench vice (photo 1) It has jaws that are 10cms (4 inches in old money). This could not only be used for holding items but I also use it for bending metal pieces to give a straight edge when I was making a panel or box. I also use two pieces of angle in the jaws of the vice to give me more of a surface area to bend a bigger piece of metal. The jaws are each held on by a couple of screws and it is easy

to change them to put on the angle instead of the original jaws which have a milled face for grip and would mark the surface of your work piece. (Some of you may remember the bench vice from your woodwork classes where you could replace the jaws) .

Measuring, marking and hole cutting .



In photo 2 you can see some marking tools I use mostly for marking out projects. Two items not in photo 2 are some masking tape and a pencil . With the tape you can cover the panel for marking it out and to protect it .

In all but the simplest of projects I have worked on, I have always made a template of the front panel in either card

or hardboard, as it can be hard to get (if not impossible) a replacement panel if a mistake is made .

What I do is take a trip to the local recycling centre and go to the spot that they keep the computers and ask for the panels off them. Then I can cut the panels down to a more manageable size and later log them into the stores department (the shed).

Photo 3 is of some hole cutters. The ones at the top require a pilot hole first and then you place the bolt through the outer part and the inner one is treaded so when you tighten the bolt it pulls the two parts together and through the panel and leaves a smooth finish. The ones at the bottom use a drill bit in the centre but when the hole is made the edges are rough and would need filing for a smooth finish.



Depending on the size of the hole you need you could get away with a drill bit and file it out the size you require. You could also try a drill bit called a cone cutter . They are a tapered drill bit normally from 3mm to 25mm, but there are other sizes , Some are also stepped every few mm, this is the type I like as you have the step to stop you going too large. As with the other type it could be too easy to go to large and you may have to dip into the spares department.

Files

As with all tools you can buy Rolls Royce or Morris Minor quality. You could do worse than going to the likes of your nearest Aldi/Lidl when they have their hardware sales (but as with everything else, you get what you pay for and it pays to get the best you can afford). Photo 4 is of some files that I use and of course you have to take care when filing not to turn that circle into an oval. If that happens it could ruin your work as the hole becomes too big for use, unless you can go up to the next size up of switch or led . (it pays to have some spare parts) .



And finally.....

Thanks to the Thos EI2JD photo studio again for taking the pictures for me.

Also, I would like to wish you a very Happy Christmas and a Prosperous New Year and that all the bargains you get at the rallies in 2010 work .

May all your signals be 5 x 9 .

73 from Pat EI-2-HX.



Software Radio

by
David Malone EI7GYB

Last Christmas, with the help of Ian Dowse, I started a simple software radio project that I had seen on the web. It is one of the most simple software radio receiver projects possible, but still has some interesting features and helps show some of the attraction of software radio.

First, let's talk about what the rationale for software radio is. Radio experimenters are very familiar with the construction of a radio: amplifiers, mixers, demodulators and audio circuits are bread-and-butter stuff. The idea of software radio is to replace certain parts of a radio, which have traditionally been circuits (i.e. hardware) with a computer program (i.e. software). You could think of this as replacing the parts of a radio that usually operate at the IF with a computer.

Why would you want to do this? Well, the primary part of a radio that you might replace is the modulator. Particularly in digital communications, there is a lot of interest in choosing good modulation schemes for the current radio conditions. A radio which does its modulation in software is free to choose almost any modulation, or even create new modulations, just by loading new software onto the radio. This is an exciting prospect for researchers, who previously had to design and fabricate circuits to try each new scheme. It is also interesting for manufacturers, who could sell a single radio that could do (say) 3G, WiFi and Bluetooth.

So, what does the most simple software radio look like? Well, any software radio receiver is going to need to convert the analogue radio signal into digital data for the software to work on. So, at a minimum we will need an analogue to digital converter (A2D). Naturally, we will also need an antenna and something to run the software on. The software radio project in question works with this minimum of components.

The project was devised by Juan Domenech Fernandez, and his description of it is available as a sequence of web pages beginning at <http://www.domenech.org/homebrew-sdr/>. It is centred around a chip called the BT878A, which is found on a number of TV Tuner cards for PCs. This chip is intended to be connected to a TV tuner circuit: it has pins that take the composite video and audio output from the tuner. The BT878A chip then digitises the video and audio and can pass it to the CPU of the PC to be displayed.

What Juan noticed was the speed of the A2D converter used for audio on the BT878A. For example, for CD quality audio, a sampling rate of 44.1kHz is used, but the A2D converter on this card can actually be programmed (with a little trickery) to run at 896kHz! Naturally, this is far above what people can hear, but it is in the range of long-wave radio signals. A sampling rate of 896kHz is enough to reconstruct signals of up to 448kHz.

Juan's project involves taking a standard TV tuner card with the 878A chip (about 80 euro), cutting the audio output line from the TV tuner circuit, and instead connecting the chip

directly to a long-wire antenna.

The details of this simple change are at <http://www.domenech.org/bt878a-adc/index-e.htm>. Amazingly, the chip is sensitive enough that no RF amplifier is required to receive signals!

The next stage is to get some software going. I used Linux rather than Windows, because it was relatively easy to modify the driver to allow the chip to sample at 896kHz. The chip is supported by a driver called btaudio, and requires a one line modification to allow the high sample rates (the modified driver is available at <http://www.maths.tcd.ie/~dwmalone/btaudio.tgz>). Since the driver acts as an audio source, we can use various audio tools to record and process the radio signals. In the rest of this article, I'll use a program called sox to show how this setup can be used as a radio spectrum analyser.

So, how do we use this setup?

Well, the first step is to unload any other drivers that might have attached to the card and then load our modified driver, and set it up for recording.

This sequence of commands should achieve that:

```
rmmod bt878
rmmod bttv
rmmod snd_bt87x
rmmod btaudio
insmod ~/btaudio/btaudio.ko debug=1
aumix -d /dev/mixer1 -q -2 100:100 -2 R -q
```

The second last command loads the driver from the directory shown with debugging messages enabled. The final command sets the recording levels to 100% --- /dev/mixer1 controls the settings for the audio on the TV card.

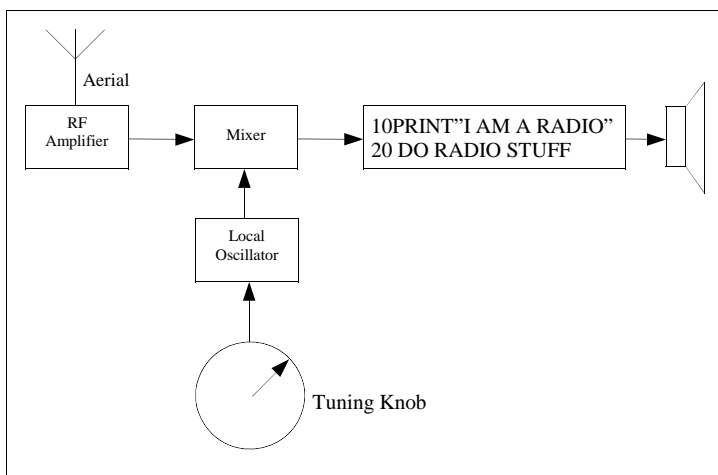
The next step is to collect some RF samples from the driver. One option is to feed them directly to another sound card, which lets us hear the raw RF signal:

```
sox -r 44100 -t ossdsp /dev/dsp2 -t ossdsp /dev/dsp
```

Here /dev/dsp2 represents the BT878A's A2D converter and /dev/dsp represents my PC's regular sound card. I'm only sampling at a rate of 44.1KHz here, because that is all my sound card can output.

Listening to the raw RF can be quite informative.

For example, turning on a low-energy light bulb near the PC allows us to hear the RF noise produced by these light bulbs.



Rather than outputting the RF samples to a sound card, we can also record them in a .wav file.

Sox can do this using the command:

```
sox -r 896000 -t ossdsp /dev/dsp2 -t .wav /tmp/test.wav
```

Now I am using the full sampling rate, and sox will keep recording until I hit Control+C (or until I run out of disk space!) From these samples I can then produce a spectrogram using a command like:

```
sox /tmp/file.wav -n spectrogram -x 40 4 -Z -50 -z 70 -s -o spectrogram.png
```

The options control the colouring of the spectrogram and the level of detail. Take a look at the example spectrogram. The horizontal lines represent fixed RF frequencies (the frequencies are shown in kHz). The darker the colour, the more power is at that frequency. As you move from left to right, the spectrogram shows how the power changes over ten seconds of time.

The particularly dark line at 252kHz is RTE Radio 1, and you can see the symmetric AM modulation on either side of it. You can see the lines for other long wave broadcast stations too, including BBC 4 on 198kHz and TDF on 162kHz.

There are a number of interesting signals in this band which can be seen, including time signals (Rugby MFS 60kHz, Frankfurt DCF 77.5kHz), airport beacons (slow Morse from Dublin at 316kHz and Garristown at 407kHz) and maybe even a faint LORAN-C navigation signal around 90--110kHz.

It also covers the amateur band around 135.7--137.8kHz.

There are a number of spurious signals: for example, I believe the signal with the steps around 133kHz is likely to be generated inside the PC, and harmonics of it can also be seen.

In a sense, we now have a radio with a demodulator that produces spectrograms, instead of audio.

Using this, I've produced a number of interesting animated spectrograms, including showing how the radio spectrum changes over the day, showing how the spectrum changes as you rotate a loop antenna to null stations out and showing the MSF transmitter coming and going during maintenance.

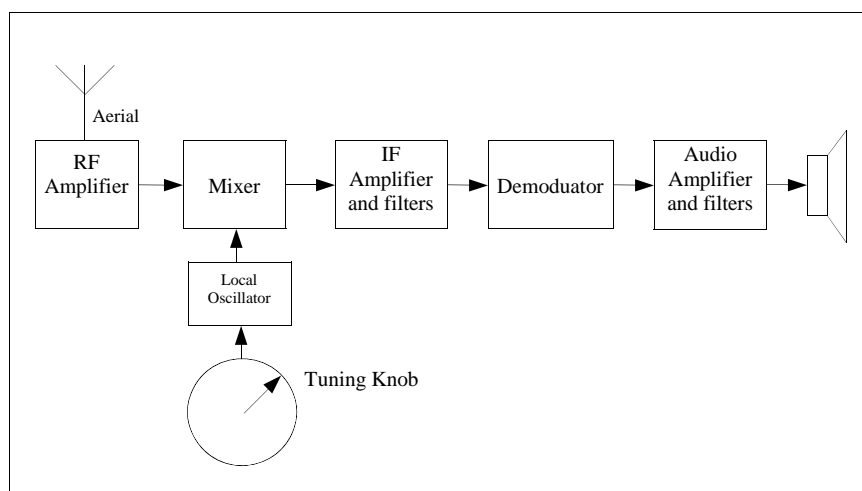
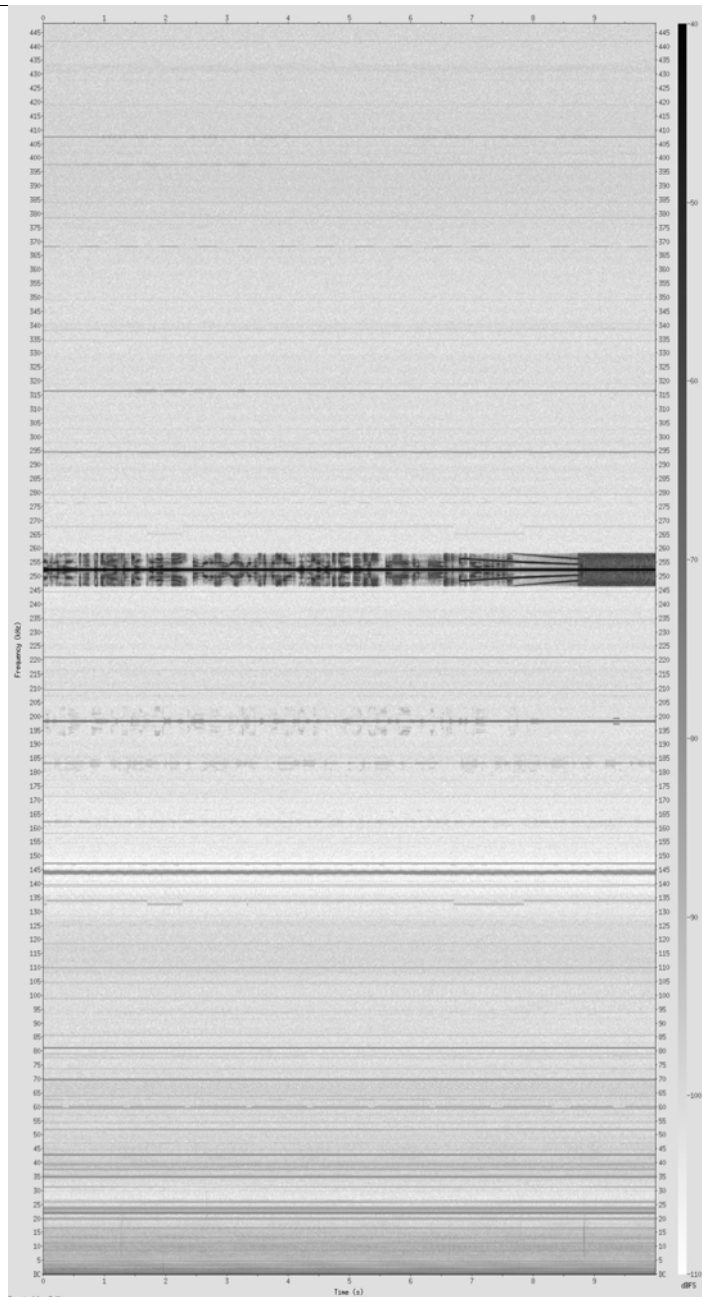
Now that we have these signals, we can demodulate any of them in any way we choose, either as we receive them or later (by storing the RF samples).

We could choose to AM demodulate them, we could apply different (digital) filters to them, we could even look at the frequency stability of the transmitters or look for out-of-band emissions. There are pre-packaged software systems for this, or, alternatively, you can homebrew your software.

I hope this gives a quick flavour of what is possible with a software radio, even with this minimal setup.

Naturally, when combined with other standard radio components, such as RF amps and mixers, even more is possible.

(C) David Malone EI7GYB.





VHF Roundup with Trevor Dunne EI2GLB

ei2glb@hotmail.com

Hello and welcome to another issue of VHF roundup.

At this time of the year VHF contacts are not too plentiful but there is always someone out there on some of the bands.

To start off with here is some information on some awards that are available to active operators on the VHF bands.

4m & 6m Shields



The two biggest awards available to VHF operators are the 6 metre and 4 metre shields. John Corless EI7IQ donated these shields to the Society and they are awarded to the leading EI/EJ IRTS member for 6 or 4 metre activity in the previous calendar year.

The winning score is calculated by number of unique QSO's x number of Squares [eg. IO63] x Number of DXCC Entities Worked. = Total score.

To submit for the awards you need to send a log to the contest manager.

Winners to date:

Year	Call	Name
2008	EI5FK	Charles Coughlan
2007	EI5FK	Charles Coughlan
2006	EI5FK	Charles Coughlan
2005	EI2JD	Thos Caffrey
2004	EI2JD	Thos Caffrey
2003	EI3IO	Dave Court
2002	EI3IO	Dave Court
2001	EI5FK	Charles Coughlan

Year	Call	Name
2008	EI3IO	David Court
2007	EI3IO	David Court
2006	EI3IO	David Court
2005	EI3IO	David Court
2004	EI3IO	David Court
2003	EI3IO	David Court
2002	No Entry	
2001	No Entry	

The same names feature each year so hopefully we will see some new entries to give the regulars a challenge.

There are some others awards available to help generate interest in the VHF/UHF bands. Have a look on the Trophies and Cups section on the IRTS website.

Band reports

Not much to report on the bands this time and we will start with:

4 Metres

In the last month there has been 3 new DXCC entities granted access to parts of the 4m band.

Belgium has been allocated a spot frequency of 69.950 ± 5 KHz so split operation is needed to work them for EI.

Norway has allocated 70,0625-70,0875 MHz, 70,1375-70,1875 MHz, 70,2625-70,3125 MHz, 70,3625-70,3875 MHz and 70,4125-70,4625 MHz

Finland has 70,000-70,175 MHz and 70,225-70,300 MHz.

There has been no reports contacts with Finland as of yet. With it being over 2000km to the nearest part, the distance is a bit too far for a normal Meteor Scatter contact.

A first contact between EI and ON (Belgium) believed to have been made by Dermot EI7IX in Mayo.

Norway had a temporary allocation in 2008 and Robbie EI2IP worked LA as a first EI-LA back then.

From my log on 4m I have had 6 contacts in the last few weeks. All have been Meteor Scatter using either FSK or JT6M. LA4YGA at 1095km for a my first LA on 4m, then G4DEZ and G8HVV who both are very strong signals here on 4m and are always helpful when a test is needed.

Worked ON4PS at 856km for my first ON QSO.

Next was DL6BF at 868km and finally the last contact I have in the 4m log is with OZ3ZW 1,216km.

I have not been that active on 4m as I have had the antenna off the tower.

I made those contacts in two days so 4m is definitely alive at present.

The only other EI that seems to be active on 4m at present is Dermot EI7IX who as men-

tioned earlier got the First EI-ON contact and also has worked stations in Germany, Spain and Norway.

6 Metres

Dave EI9FBB reports a surprise opening on 6m on the 20th November at around 1000. Dave reports many contact into Italy and Hungary. Some of which were: IK2HDF in JN45 and HA5HA in KN06.

The EI beacon has been spotted on DX-Cluster a good few time in October and November so there is still signs of life on 6m.

I have not been active on 6m in a few months but hope to add a few more squares to my tally before the end of the year.

2 Metres

There has been no enhanced Tropo to speak of in the last while so 2m has been very quite here. My main source of contacts is the UK Activity Championship which is on the first Tuesday of each month.

During this contest it is easy to work contact up to about 500km away, The hardest part is the get the G stations to point west as the don't expect much activity over here in EI. But with the help of EI3GE and myself being active it is getting easier as the months go on.

70cms

Only activity noted on this band has been by EI8JB and EI4ESB on satellites. Please send reports of your activity for the next issue.

Best wishes to you and yours for the holiday season.

Trevor EI2GLB

MRG VHF/UHF SSB Challenge 2009

Fixed section

	Station	Locator	144MHz QSOs	432MHz QSOs	Score
1	EI2GLB	IO63md	11	0	2,928
2	EI3GYB	IO53ot	7	2	532
3	EI2MRG	IO53ku	5	2	247
4	EI5DD	IO53lg	4	0	225
5	EI3JD	IO63gg	1	0	36

Portable section:

1	EI7MRE/P	IO53jw	6	2	414
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Best distance worked:

144MHz - EI2GLB (IO63md) - G0KPW (JO02rf) - 576Km.
432Mhz - EI3GYB (IO53ot) - EI2MRE/p (IO53jw) - 31Km.

Society Selling Car By Tender.

2008 Kia Rio 1.4 Automatic. 5,000kms. Adapted for disabled use.

Fitted with FT-857D, HF and VHF Transceiver & Antennas

The Donor

John B. Riordan EI6IJ of Kinnego, Buncrana, Co. Donegal has offered to donate his '08 Kia Rio car to the IRTS.

John has attached no conditions to the donation other than that the funds generated by the disposal of the car be devoted to promoting Amateur Radio to people with disabilities; assisting elderly or infirm Amateurs/SWLs to remain active and developing programmes within Amateur Radio for the housebound and lonely.

John's more than generous offer has been accepted by the IRTS Committee and the car will now be sold by the Society to raise funds to devote to furthering those objectives.

Although born in Kerry, John's background was in Cork City. He has not lived in the southern capital for many years but his accent still has that distinctive southern lilt.

He was diagnosed with Multiple Sclerosis almost thirty years ago, but lived a relatively normal life until recent years. MS is, of course, a progressive disease and over time it became more difficult for John to do the things that were once routine.

In 2008, he found that he was no longer able to drive a standard car with safety, so he purchased a new Kia Rio and had it adapted for disabled use.

His plan was to travel widely around the country enjoying the scenery and Amateur Radio. To this end, he had a Yaesu FT 857D, together with HF and VHF antennas, professionally installed in the Rio.

Unfortunately for John, his plan did not work out quite as he had intended. As his disease progressed, he found that driving became so difficult that he had to abandon it altogether.

John considered selling the car to one of the Kia dealers in Donegal, but knew that this approach would involve removing the radio equipment. He also considered raffling the vehicle within the IRTS membership, but legal and other considerations ruled this out. Finally, he settled on a donation to the IRTS with "no strings attached"

The Sale

Rather than utilising a private sale, or selling direct to the trade, the IRTS Committee has decided that the car should be offered for sale by sealed tender through Echo Ireland.

Those with an interest in purchasing the vehicle should submit an expression of interest to arrive on or before December 28th to the Society Treasurer, Sean Donelan EI4GK.

Expressions of interest must be by mail to Sean's call book address or by email to donelansean@gmail.com.

There is no obligation on those submitting expressions of interest to make a bid for the car.

In early January the car will be available for examination in the Dublin area by those who have submitted an expression of interest. At that time, a professional report on the vehicle will also be available.



Those who are still interested in purchasing the vehicle will then be invited to submit sealed bids to the Society's Auditors by a specific date.

The car will be sold to the highest bidder provided that bid is in excess of the reserve price.

The sale is open to all - members and non members of the Society and those from outside the hobby.

Prospective purchasers with Amateur licences should bid for the car inclusive of the radio equipment.

Prospective purchasers without Amateur licences should bid for the car only.

In this instance the radio equipment will be removed and disposed of separately.

The Car

The car is pictured above. It is a Kia Rio purchased new in July 2008. Its has a 1,400 cc engine and automatic transmission. In its short life it has travelled little more than 5,000 kms.

donelansean@gmail.com



Digital Ammeter by Clifford Beck EI5FQB

For some time now I have always had an interest in a digital amp meter. When you get a commercial digital multi meter the majority of them only go up to 20 Amps.

We have a small scale wind generator at home 12V 400W 33.3A output and an analogue amp meter to show the output current.

As the analogue meter doesn't show the milliamps and has a scale of two amps per division I set out about building a digital one.

The meter is based on the ICL 7107 3 1/2 Digit LED Display, A/D Converter. This chip is low power and will drive the led display directly. Data sheet can be found at www.intersil.com/data/fn/fn3082.pdf The ICL7107 also needs a -5V supply. This is done by the TC7660 IC. Please make sure that the negative lead of C4 and C5 the two 2.2uF capacitors are wire straight to ground. If they are not, you will not get the -5V output on pin 5. This is one problem that I had. Data sheet can be found at <http://www1.microchip.com/downloads/en/DeviceDoc/21465b.pdf>

The seven segment displays are common Anode right hand decimal types which are connected to the +5V supply. I also put these on a 40pin IC socket so it would be easier to change them if one ever went. I used the LM7805 voltage regulator in this circuit so the circuit could be connected to a 12V supply. The regulator will need a heat sink as it does get quite warm.

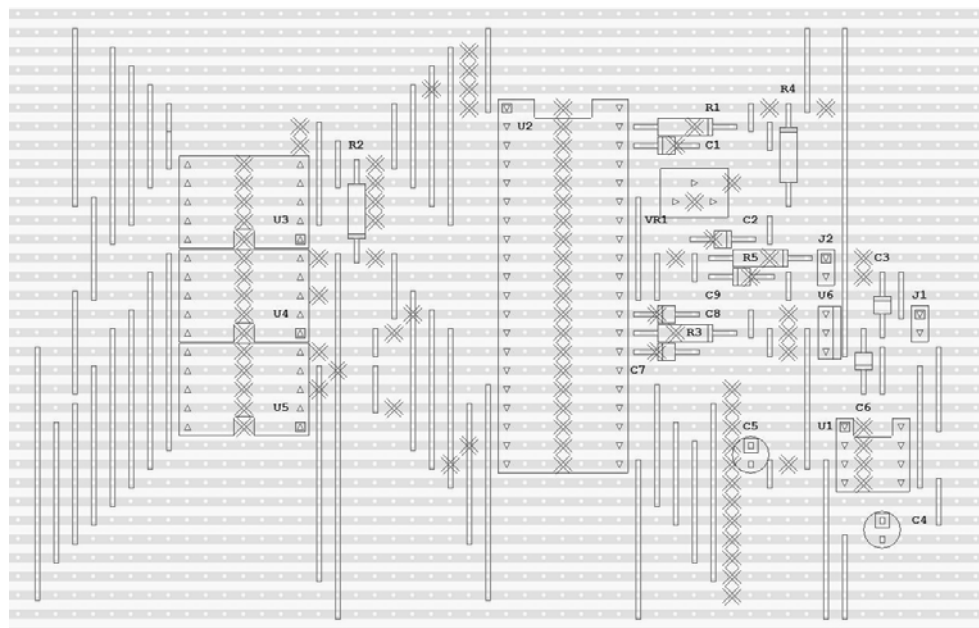
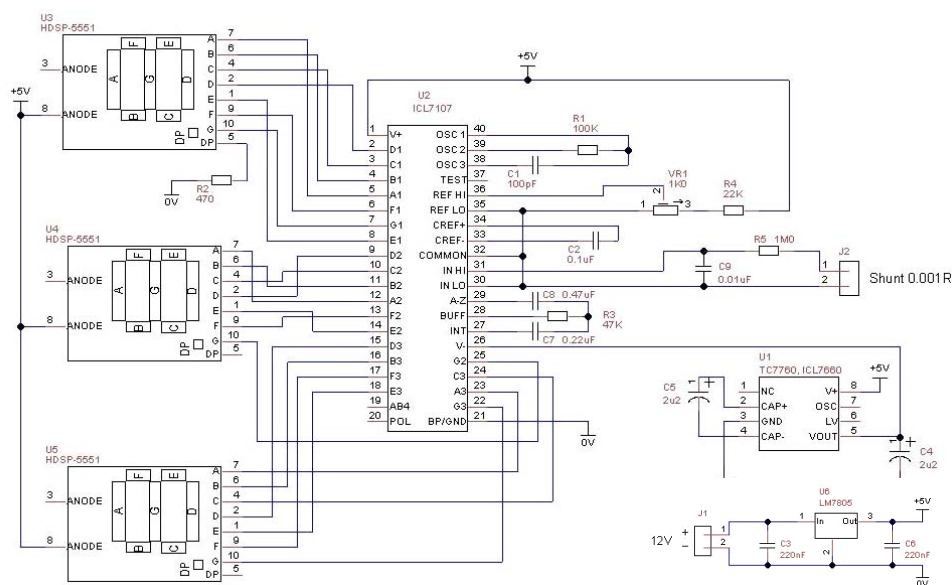
This meter is to be connected on the negative line. VR1 is to be set to a reference of 100mV.

You can wire the accurate shunt to your display meter. Unlike homemade shunts, it will be stable with temperature. You must calibrate your meter so 10A input reads 10.0 etc.

To do this, you connect a digital multimeter in parallel and adjust your calibration pot until both meters read the same voltage. This meter will measure up to 99.9A.

I made my shunt out of a piece of high tensile wire that the council used years ago in fencing.

Attach one wire from J2 to one end of the



high tensile wire. Slide the other wire from J2 up and down the high tensile wire until you get a reading of current that you know a resistor draws. Commercial shunts can be got from: Jaycar, an Australian company. <http://www.jaycar.com.au/productView.asp?ID=QP5412&keywords=shunt&form=KEYWORD> <http://uk.farnell.com/datel/3020-01096-0/shunt-50mv-50a/dp/1339339>

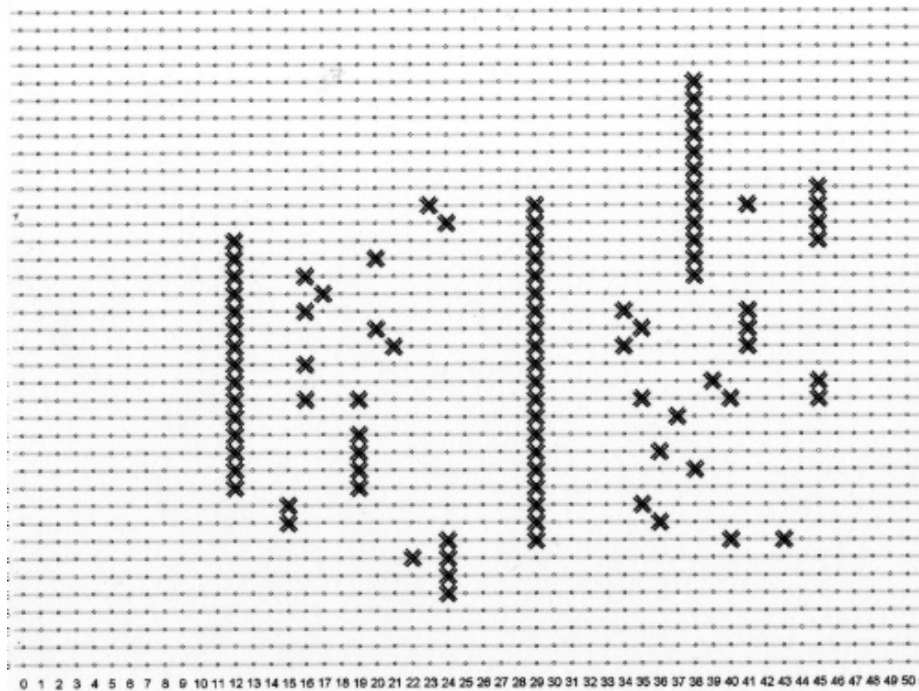
The above shunt will take 50A without damage. You can get bigger 0.001 ohm shunts which can take more current.

The circuit is made on a piece of strip board, 35 strips by 48 holes.

Components

R1 100K: C1 100pf: U1 TC7760, ICL7660 J1 12V
R2 470 C2 0.1uf U2 ICL7107 J2 Input from shunt
R3 47K C3 220nf U3 HDSP-5551 40 pin IC Socket x2
R4 47K C4 2u2 U4 HDSP-5551 8 pin IC Socket
R5 1M C5 2u2 U5 HDSP-5551 Heat sink for 5V regulator
VR1 1K C6 220nf U6 LM7805
Shunt 0.001 C7 0.22uf
C8 0.47uf
C9 0.01uf

Email: 98ei5fqb@oceanfree.net



Lough Erne Amateur Radio Club



Lough Erne Amateur Radio Club Committee 2009/10.

Alan Gault GI6PYP, Michael Clarke MI5MTC, Herbie Graham, GI6JPO, Iain Gibb MI3GHY, Ivan Humphreys, GI8WJN and Chriss Morton 2IONIE.

Photo Cliff Corderoy GI4CZW.

At October's AGM, Lough Erne Amateur Radio Club elected a new Committee - Chairman Michael Clarke, MI5MTC, Vice Chairman, Chriss Morton 2iONIE, Ivan Humphreys GI8WJN, Secretary, Herbie Graham GI6JPO, Treasurer, and members Iain Gibb MI3GHY, Rally Organiser, Alan Gault GI6PYP, past secretary and Jerry McLernan MI3GHW past Chairman.

For over 30 years, a group of Fermanagh amateurs have been on-air with others in these islands, Europe and world-wide. The Club's latest big success is the GB3CP repeater, funded entirely by the Club, and covering Fermanagh and parts of nearby counties in Northern Ireland and the Republic.

Club plans include another Foundation course, continued technical support of the local Talking Newspaper, special stations similar to last May's success at Marble Arch Caves Geopark with contacts as far as Australia, and on 11 April 2010 the Club's traditional April rally at SHARE which has brought many hundreds of amateur radio visitors from north and south to Fermanagh since the first in 1982.

In September, the RSGB Fun Bus, fitted out with amateur radio equipment visited Enniskillen secondary students to foster interest.

Young or older, to get into local amateur radio, contact Alan Gault GI6PYP, telephone 6634-1108 or Michael Clarke MI5MTC, 6862-1436.

Train the Trainers

The Society is considering running a "Train the Trainers" session for theory tutors intending to run classes and who wish to use the Society's CD Exam Course Guide.

This may also be of interest to those unable to attend classes and who wish to use the Guide as a study aid for the Theory Examination.

The two-hour session would most probably take place on a weekend afternoon and would demonstrate how best to use the CD Guide and also practical matters relating to preparing students to sit the Exam.

If you are interested in participating in such a Training Session please drop an email to Paul EI2CA or Seamus EI8BP or indeed any of the Committee Members.

Their contact details are on the IRTS website and on page 2 of this issue of Echo Ireland.

CQIR Contest

Following the success of the first CQIR contest held during the IRTS 75th Anniversary celebrations in 2007, the Society's Committee at their last meeting discussed requests from at home and abroad for a repeat event.

You may recall that this HF event celebrated the Irish diaspora overseas and gave an opportunity for those with green blood in their veins to enjoy a Worldwide Irish Contest.

The committee decided to consider running the event every five years on a weekend close to St. Patrick's Day which would mean that the next event would be in March 2012 to coincide with the IRTS 80th Anniversary celebrations.

We can also look forward to improved Solar Cycle conditions by then.

The Committee will consider revising the rules based on lessons learnt during the first event.

If you have any suggestions or comments please forward them to the Contest Manager, Thos EI2JD.

Newsletter input to

ei4bz@eircom.net



International Amateur Radio Union Monitoring System

with Ger McNamara EI4GXB

ei4gxb@gmail.com

Welcome to the final edition of IARUMS news for 2009.

Over the last year we have helped out IRTS members with intrusions on the 80m DX window, some spurious emissions on parts of the 144MHz band and various incursions in the CW section of the 20 & 40m bands.

From time to time there are still some Broadcast transmissions on the newly extended 40m section from 7.100 to 7.200MHz and these are also being investigated by myself and my fellow IARUMS co-ordinators around the globe.

Following our submissions the BC stations are slowly disappearing.

Here is an extract of the latest monitoring efforts. Intruder News from: December 06th 2009

kHz	UTC	Date	ITU	Ident	Mode	BD	SH	Details
7000.000	1400	dly	INS	names	USB			Indonesian pirate net, male + female
7018.000	vt	dly	RUS	REA4	F1A/B	50	1000	RUS Airforce Moscow, ident 00h + 41 min
7038.700	ady	dly	UKR	D	CW			beacon "D" - Sevastopol
7038.800	ady	dly	RUS	P	CW			beacon "P" - Kaliningrad
7038.900	ady	dly	RUS	S	CW			beacon "S" - Murmansk
7039.000	ady	dly	RUS	C	CW			beacon "C" - Moscow
7039.200	ady	dly	RUS	F	CW			beacon "F" - Vladivostok
7039.300	ady	dly	RUS	K	CW			beacon "K" - Petropavlovsk
7044.340	1800	dly	RUS		FSK15?	10.8	2700	area of Novosibirsk – undefined noise
7054.000	vt	dly	RUS		F1B	50	200	RUS MIL Moscow – morning and evening
7055.500	vt	dly	CHN	no ITU	FSK8	125	1750	ALE, "135" "107" – PRC-PLA
7089.800	1238	dly	UKR		F1C			WX-fax - 60 rpm – IOC 576 - Sevastopol
7090.000	vt	dly	TUR		PSK8	2400		Link11 – SLEW – West-Turkey
7140.000	vt	dly	UZB	no ITU	FSK8	125	1750	ALE, "1104" "1703" "1708" – UZB MIL
7186.000	vt	dly	RUS		PSK2	120	2600	12 x 120 Bd, AT3004D, Murmansk
10101.000	vt	dly	MRC	names	USB			Moroccan fishermen
10107.000	0800	dly	RUS		CW			dots, 20 msec, Novosibirsk, navigation?
10147.000	1400	22.11.09	FEa	Bora	LSB			Far or Middle East pirates, "Bora Bora"
14000.000	vt	dly	AGL	"LK"	USB			Angolan pirate net
14000.000	0803	dly	POR		DRM			noise shield from DRM on 13810 kHz
14000.000	1115	23.11.09	MEa		P0N			OTH radar, 100 pps, 35 kHz wide, IRN?
14002.200	vt	dly	Afr	names	USB			African pirate net – tribal language – 200°
14077.400	ady	dly	UKR	D	A1A			2nd from 7038.700 - screenshot
14139.000	vt	dly	CHN	no ITU	FSK8	125	1750	ALE, "597" "809" – PRC-PLA
14166.000	vt	dly	CHN	no ITU	FSK8	125	1750	ALE, "867" "963" - possibly PRC-PLA
14255.000	1130	10.11.09	RUS		P0N			OTH Radar ABM2, Moscow, screenshot
14295.153	vt	dly	TJK		A3E			3rd from 4765 – Radio Tajikistan
14311.000	ady	dly	FEa		CW			"8BAA" de "0WSV" – endless slip
14337.000	vt	dly	CHN	no ITU	FSK8	125	1750	ALE, "143" "246" – PRC-PLA
21000.000	1200	dly	SDN	"80"	USB			MFA Khartoum and SDN emba Yemen
21002.170	vt	dly	SDN	!500	F1B	200	200	Pactor 1 encrypted, SDN emba Yemen
21425.000	0920	27.11.09	RUS		F3E			Russian taxi, woman on base station
21438.000	vt	dly	RUS	RCV	CW			"RCV" "RIP90" – Russian Navy

UTC = universal time coordinated (=GMT) /// ady = all day /// vt = various times /// dly = daily /// vd = various days
date (dd.mm.yy) /// IDENT = call, selcall /// MODE = USB, LSB, A3E = AM, F3E = FM, F1B (= FSK), G7B, J7D
ALE = MIL-188-141A /// NWAf = North West Africa /// con = continuous) /// ITU = ITU-abbreviation /// BD = baud
/// SH = shift (Hz) /// DETAILS = observed details /// uniden (ui) = unidentified /// AF = Airforce /// MOI = Ministry of Interior
/// MOD = Ministry of Defense /// MFA = Ministry of Foreign Affairs /// MEa = Middle East /// FEa = Far East /// EAf = East
Africa /// CAf = Central Africa /// CIS = Community of Independent States (earlier UDSSR) /// NAf = North Africa /// NEu =
Northern Europe /// PRC = People's Republic of China /// PLA = People's Liberation Army (China) /// pps = pulses/second
(Radar) /// CIS = Community of Independent States /// emba = embassy /// DPRK = Democratic People Republic of North
Korea /// NGO = Non Governmental Organization /// MOPO = Ministry of Public Order /// FSK = frequency shift keying ///
PSK = phase shift keying

Latest

7038.7 Beacon "D" – UKR Sevastopol – spurious on 7000.0 and 7077.4 – harmonics on 14077.4 and 21116.1 kHz (Nov. 2009) – We are not amused!

That's it for this month and indeed 2009 and I would like to take this opportunity to thank all members who have been in touch during the year with observations and words of encouragement.

Wishing you all a very happy, peaceful and prosperous Christmas and New Year.

73 Ger

Free IRTS membership for a year!

To encourage more members to pay their subscriptions by direct debit and to reward those who are already doing this, we are offering free membership for a year to **five** members, drawn from everyone who has a direct debit mandate in place for their annual IRTS membership subscription.

What's the benefit for the Society?

A renewal notice does not have to be issued, while processing and record updating is completely automatic – a saving on paper, postage and the time of our volunteer officers!

What's the benefit for the members?

Payment is made automatically, you don't have to post a cheque – a saving on time, postage and possibly on bank charges.

Direct debit payments can be made from most Republic of Ireland bank or building society current accounts. You can cancel a direct debit mandate at any time by informing the Membership Records Officer.

To those who have a direct debit mandate in place already – a big **thank you** from us, you will be included in the forthcoming draw. To other members with bank accounts, we ask you to consider completing the direct debit mandate included with this issue of Echo Ireland; a direct debit mandate can be submitted at any time, it will not be activated until your current membership subscription expires. Send the mandate to:

Joe Ryan EI7GY
IRTS Membership Records Officer
34 Watson Road
Killiney
Co. Dublin

All members with a direct debit mandate in place on 31st March 2010 will be included in a draw for **five free memberships for a year** which will be held at the Annual General Meeting on 25th April 2010.

Sean Donelan EI4GK
Treasurer
donelansean@gmail.com

Joe Ryan EI7GY
Membership Records Officer
memrecords@irts.ie

The Wireless Institute of Australia to celebrate its centenary

The Wireless Institute of Australia turns 100 next year making it the world's oldest National Radio Society.

WIA President Michael Owen VK3KI says he wants the world-wide amateur radio community to join in the celebration.

A commemorative QSL card will be issued for contacts with VK100WIA between May and October next year.

A limited edition operating award, called the WIA Centenary Award is also to be available and two contacts with VK100WIA are required under its rules.

A program of events will occur around the WIA's annual meeting in the nation's capital Canberra in May 2010, while radio clubs are planning events to promote the centenary of organised amateur radio in Australia.

It all began in 1910 with a meeting of wireless pioneers in Sydney to protect their interests and rights against what they considered to be harsh treatment by authorities and a high licence fee.

The Wireless Institute of Australia has continued since then to protect and enhance the privileges of radio amateurs and to promote amateur radio.

Details of the centenary program are on the WIA website www.wia.org.au

Joint Club Christmas Dinner

The North Dublin Radio Club, Fingal Radio Club and the Howth Martello Radio Group are having a joint Christmas dinner on Saturday 19th December.

The restaurant in the Coachman's Inn near Dublin Airport is the venue and the meal will start at 8:30pm.

The Christmas menu is €19.25 with an a la carte menu also available. This is the second year that this joint dinner has been organised. Last year's dinner was a great success and so this year it has been decided to invite other amateurs, SWLs and friends. Lapsed members of both clubs would be particularly welcome.

Places are limited and early booking is recommended. If interested please email tony@ei0mar.org as soon as possible to make a reservation.

New Club in Wicklow?

Iain EI5GN is interested in starting up a radio club in Wicklow town. Iain has a premises confirmed and it is virtually free of charge!

If there is anyone interested please email Iain at ei5gniain@gmail.com or at QTHR.

Outgoing QSL Bureau

Please mail your cards
directly to the
Outgoing Bureau Manager:

Anthony Baldwin
EI8JK,
Rathlin,
Kilcrohane,
Co. Cork.

ei8jk@amsat.org

Report from the ARRL and TAPR Digital Communications Conference.

By John Ronan EI7IG

Recently I attended the ARRL and TAPR Digital Communications Conference in Chicago, Illinois.

I was there for two reasons, firstly, I've always wanted to attend, ever since my first exposure to Packet Radio in the early 1990's and secondly I was there to present a paper [1] that I was co-author of entitled "Experiments with Delay and Disruption Tolerant Networking in AX.25 and D-Star Networks".

The conference itself was held in a Holiday Inn, about 15 minutes shuttle ride from Chicago's O'Hare airport. I arrived in Chicago two days early in order to fit in some sightseeing and get over Jet-Lag. Andy, EI8IM/N9GTR invited me out to his place for a meal and a few beers prior to the conference. Many thanks to Andy and his XYL for a most enjoyable evening.

I headed to the Conference venue on Thursday afternoon and bumped into QEX editor Larry Wolfgang, WR1B on the shuttle bus from the Airport, we had a great chat on the way out and I bumped into him several more times over the weekend.

Larry had managed to get himself persuaded to give the first full presentation on the DCC where he outlined his experience with building a NUE-PSK modem, and his first experiences with soldering surface mount devices. As a spin off of the talk, Scotty Cowling, WA2DFI, (Newly Elected TAPR Vice President) had the idea to set up a solder station in the Demo Room for anyone to experiment with.

Unfortunately every time I went in to have a go the station was busy, so it proved very popular.

There were other projects and displays in the Demo Room, several of which were highlighted by technical presentations during the DCC itself. Bill Brown, WB8ELK gave a very interesting and humorous talk and presentation at the Saturday evening banquet and had various 'payloads' on display in the Demo Room. David Bern, W2LNX had an interesting Paddle to PS/2 Keyer on display, which uses a pic microcontroller to take morse as the input from a keyer paddle to emulate a PS/2 keyboard and mouse. John Hansen, W2FS gave a presentation on his zigbee based virtual serial cable.

This uses the zigbee protocol at 2.4Ghz to connect two RS-232 devices. Very useful for programming a radio in a car outside while you remain warm in the shack inside. He promptly sold out of the few units he had with him (I had to wait until Sunday evening to collect the last one as he needed it for his Demo). Bob Bruninga, WB4APR was also in the Demo Room reminding us that APRS is a two way messaging medium. Lastly ICOM and Kenwood also had displays set up as did Don Arnold, W6GPS with the AvMap GPS.

The event itself was well organised, I thoroughly enjoyed all the presentations and the discussions, and the hospitality show by the hosts and other attendees alike was excellent.

As for TAPR, well if you have used a packet radio TNC, then you are already a part of TAPR history. The TNC (Terminal Node Controller) project grew from a discussion in October of 1981 at a meeting of the Tucson Chapter of the IEEE Computer Society. A week later, six of the attendees gathered and discussed the feasibility of developing a Terminal Node Controller that would be complete and available to amateurs at a modest cost. This was the genesis of Tucson Amateur Packet Radio (TAPR).

On June 26th 1982, Lyle Johnson, WA7GXD, and Den Connors, KD2S, initiated a packet contact with the first TAPR unit.

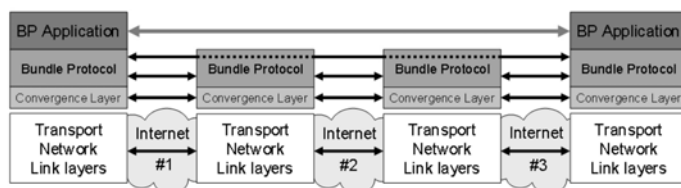
The project progressed from these first prototype units to the TNC-1 and then finally to the TNC-2 which is now the basis for most amateur packet operations worldwide. TAPR was founded in 1982 as a international organization with interests in the areas of packet and digital communications. Today, TAPR continues as a membership supported non-profit amateur research and development organization. TAPR currently has more than 2000 members, worldwide and continues to develop kits for the amateur community and is working actively on publications and communications standards.

Now, to the paper I presented. As you probably know, Amateur Radio emergency communications networks have used the AX.25 protocol [2] for many years and in it's heyday during the late 1980's and the early 1990's, the Worldwide AX.25 based Bulletin Board System (BBS) network moved email over both terrestrial and satellite (AO-51, GO-32 and others) links across vast distances on an AX.25 based store-and-forward network (both 1200 and 9600 baud).

Much of this infrastructure is no longer in place, with much of the previously AX.25 links replaced by TCP/IP links between systems. Other AX.25 networks have been replaced over the last number of years by much cheaper WiFi links, and more recently by equipment supporting the JARL developed, Icom produced [3] D-STAR Digital Data (DD) mode equipment.

Recently there has been a resurgence of interest in the AX.25 protocol due to the deployment of the Winlink [4] system which uses AX.25 (and other protocols) as the "last mile" onto an Internet connected backbone. This has led to AX.25 TNCs being returned to service after many years of inactivity. However in the event of Infra-structural failure, where there is no "Internet" in an area or surrounding RF areas, the Winlink system is unable to operate in ad-hoc mode has to utilise much slower (and much more expensive) HF communications links for data connectivity in and out of an effected area.

In the last few years, DARPA and the Internet Engineering Task Force have developed a Delay/Disruption Tolerant Networking Architecture [5] and protocol [6]. DTN uses in-network or node-level storage to provide an overlay network on top of a number of heterogeneous network infrastructures (see Figure 1). Node-level storage allows application messages called "bundles" (in the DTN architecture) to be stored at DTN gateways for arbitrary lengths of time while waiting for a forwarding path for become available. This differs from IP's store-and-forward model where IP packets must be forwarded immediately or must be dropped. It harks back to the days of the AX.25 based BBS network, where (especially at satellite gateways) AX.25 gateways had to store messages until the next satellite passed overhead.



In their 1985 paper[7], Phil Karn, KA9Q and his co-authors describe the work required to implement distributed protocols to allow for automatic exchange of connectivity information across heterogeneous ad-hoc connections that have a wide per-

formance range. Also, given the nature of the amateur service some links may have unusual characteristics such as asymmetric RF performance and part time availability due to changing propagation conditions or limited satellite visibility. Concern was also raised that the amount of storage needed to store routing tables must be minimised in order to keep storage costs down.

Because DTN operates as an overlay network over transport layers, it allows for different transport protocols to be used at different points along the path. This allows the selection of transport parameters suitable for the local environment. In the context of the DTN overlay network, the various transport layers used between DTN routers are termed "convergence layers. In thisway, DTN can provide a framework for interconnecting heterogeneous network segments, i.e. fulfil the requirements mentioned by Karn in 1985.

In the paper we explored the possibility to allow for the re-use of existing AX.25 network infrastructure as part of a more general ad-hoc emergency communications network. Utilising the DTN architecture to hide the specifics of the AX.25 protocol from the application layer.

Tools [8] already exist to use a DTN network for the transport of 'email'. These tools presenting a standard SMTP[9] and POP [10] interfaces to a user's application. In our case we used the Thunderbird email client.

So, in essence, if we add DTN to a node with AX.25, D-STAR, WiFi and any other network technolgy.

It could participate as part of a larger network, forwarding emails and files between nodes. This could be done without any of the nodes having an Internet connection. This is very attractive from an emergency communications perspective.

Since 2007, Darren Long G0HWW and I have been working on a DTN Convergence Layer (DTN-CL) for the Linux AX.25 stack, earlier this year, we decided to benchmark it against existing network protocols for use in packet radio networks.

Firstly we did some calculations based on a "perfect" 1200 baud channel and, given our 7182 byte test file, we came up with a table of "ideal" transfer times:

Window size	Timings for ideal model (seconds)
1	67.2
2	60.4
3	58.0
4	57.1
5	56.1
6	55.6
7	55.6

Then we compared each of the following against this table:

- * Direct TNC transfers (built in PMS)
- * KISS mode transfers (linux ax25 tools)
- * TCP/IP
- * Our prototype DTN-CL

If we just concentrate on a window size of 1 (maxframe). (Why? because this is what should be used at the link layer in any network where there are multiple stations on a single channel and that channel is half duplex.) We get the following:

Ideal	PMS	KISS	TCP/IP	DTN-CL
67.2	119.2	75.6	146.0	84.6

As can be seen the DTN-CL is approximately 61 seconds faster at transferring the same 7182 byte file than TCP/IP is. This is

interesting in that it is almost taken as a given nowadays that the TCP/IP protocol should be used everywhere.

Curiously, the fastest transfers do NOT occur when two TNC's are talking directly with no computer involved. This is, we think, due to the fact that the TNCs built in PMS systems are running on a small "processor" inside the TNC and, these are in fact, not powerful enough to do the job.

When KISS mode is used, and the processing is handed off to the host computer, the transfer time's drop significantly (119.2 - 75.6 seconds), much closer to the "ideal".

So to conclude, at the moment the DTN-CL is very experimental, there are still bugs, and also there are still some fairly significant in-efficiency's in it which we hope to correct given time. However, when it is compared against what exists already (i.e. TCP/IP) it, even now, performs adequately

References

- [1] J. Ronan, K. Walsh, D. Long, Experiments with Delay and Disruption Tolerant Networking in AX.25 and D-Star Networks, 28th ARRL and TAPR Digital Communications Conference, Chicago Illinois, September 2009.
- [2] W. A. Beech and D. E. Dielsen and J. Taylor, AX.25 Link Access Protocol for Amateur Packet Radio, version 2.2 Revision July 1998.
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- [5] V. Cerf et al Delay-Tolerant Networking Architecture, RFC 4838 <http://www.ietf.org/rfc/rfc4838.txt>
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Emergency Communications

By Laurent Schoummacker, EI9JV

ei9jv@aren.ie

In the South was the Sean Kelly Tour

The Sean Kelly Tour took place on Sunday August 30th, and from all unofficial accounts it was quite successful with roughly 2700 hardy cyclists taking to the roads.

Saturday evening, AREN was requested to assist by Waterford County Civil Defence in maintaining an accurate location of as many of the three different sub-events (50k, 100k and 160k) as possible. The intention was to allow Civil Defence them to more efficiently deploy their own medical resources around the course and to keep the event organisers more informed. Extensive use was made of the APRS protocol and of the South Eastern Amateur Radio Group's APRS digital repeater network. It definitely proved it's usefulness on the day as it allowed AREN members in Net Control to keep both the Civil Defence and event organisers updated as to the locations of various vehicles almost in real-time through out the day

Many thanks to EI2KA, EI8FDB, EI5GOB, EI2GN, EI3IQ, EI2JP, EI7IG, EI8EPB and EI8JA for their assistance on the day.

In the North AREN met the Donegal Mountain Rescue

On September 16th, Laurent - EI9JV met with the Donegal Mountain rescue Team in the Letterkenny Fire station Co. Donegal, the main purpose was to provide basic radio training involving; radio techniques, ITU alphabet, pro words and more, but also to explain how AREN could assist during emergencies or events happening in the area.

It was also an opportunity to start building a relationship between the Donegal Mountain Rescue Team and the AREN as this has never been done in the North West part of the country before. DMRT was represented by eight members including Joe Pond (Team Leader), John Mc Shane (Training Officer),

Tracy Mc Kenna, Leo, Brian (Deputy TL) and Gerrard Murray, Andrew Gillespie, Richard Mc Grater (Comms officer). At the end of the meeting DMRT invited AREN to be present during their upcoming exercises happening on September 26th, which we hope will be the first of many. Additional information can be found by contacting Laurent EI9JV.

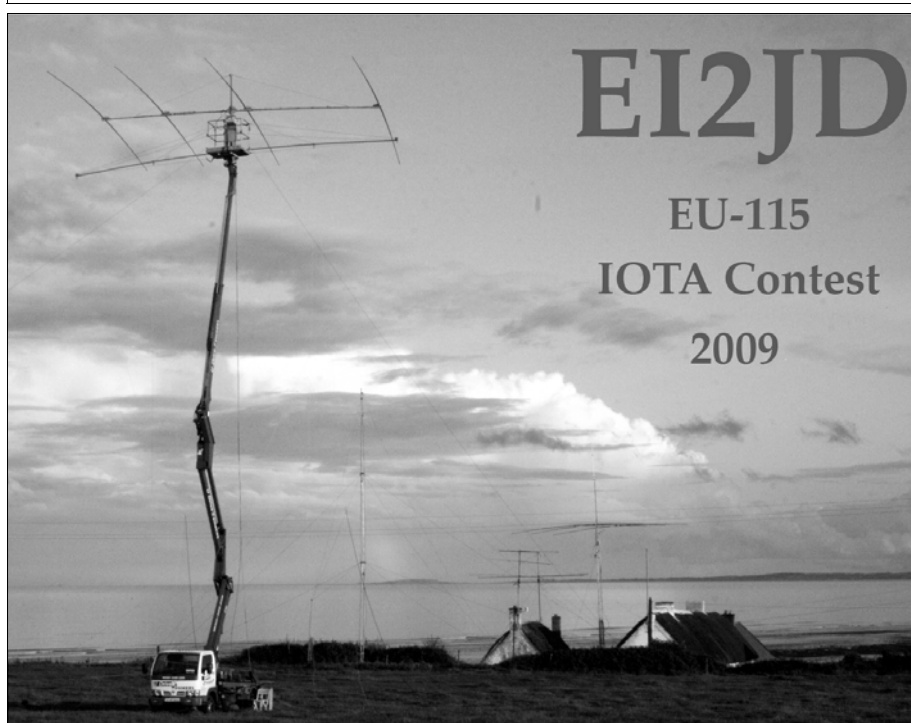
Donegal Mountain rescue website: www.donegalmrt.ie

Another for Donegal: The Glenties Gap Challenge

September 26th, the Gap Challenge:

Located on the edge of the Atlantic Ocean in South west Donegal are the village of Glenties, Ardara, Portnoo and Rosbeg where for the first time last year, towards the end of September, people of all ages gathered together to take part in a unique event combining Mountain Bike race, Atlantic Swim, Run and Kayak race to raise funds for the Royal National Lifeboats Institute. The Donegal Mountain Rescue Team (DMRT) was there again this year to make sure all bikers were safe on the 60k bike challenge. To do that, they used their MCP as the center of operation, on one side of the mountain, which received messages from another vehicle located on the other side of the Mountain Bike track relaying live information about the cyclists. Laurent EI9JV was assisting in setting up and adjusting new aerials to sit on top of DMRT MCP. After giving DMRT some instruction the previous week on radio procedure, Laurent, EI9JV was in one of the communications vehicles monitoring proceedings while messages were being passed. Following from the success of this events in the weeks to come. He hopes to continue to assist them with the training on Radio usage in Emergency operations and join them on more operations in the future, representing AREN and demonstrating how AREN can be involved within the Emergency network in the North West.

<http://www.gapchallenge09.com/index.html>



Kells Radio Club Visit to CARA

Ronnie McGrane EI9ED and Kells Radio Club Chairman John Fitzgerald EI9HW together with PJ O'Reilly EI8IP paid a visit to a recent Crossakiel Amateur Radio Association meeting.

Ronnie gave an introductory talk on his role as a member of the repeater management group, with an insight into some of his on going work and future projects, notably his Green Repeaters and some of his ATV Projects. More info on these to follow when available.

CARA Meet every Wednesday at 2030 in the Welcome Wagon in Crossakiel. All are welcome to attend.

Crossakiel Amateur Radio Association



Back L to R: Steven EI4GKB, Paul EI2CA, Ivan EI1166, Charlie EI8JB, John SWL
Front: David EI7GEB, John EI6GHB, Gary EI3GIB, Alan EI5GFB, Daniel SWL

In September 2006 a group of radio enthusiasts came together at The Welcome Wagon pub in Crossakiel, Co. Meath, each with the desire to achieve their amateur licence with the help of EI3GIB Gary and EI4GKB Stephen.

At first this seemed difficult to attain, and after some confused and baffled "would be" amateurs reading the IRTS disc, it was decided a tutor would be needed and Michael EI2GKB and Nicky EI2JL were drafted in from South Dublin Radio club to unravel this mystery.

The original group all went on to get their licences and it was then decided to form a radio club and in 2007 the Crossakiel Amateur Radio Association (CARA) was born!

The Welcome Wagon Pub continues to be the home of CARA. Since the formation of the club several more "would be" amateurs have attained their licence with the club's help. Thanks to Michael EI2GKB those once baffled "would be" amateurs now train other enthusiasts and help them get their licence.

In early August 2009 CARA applied to the IRTS for club membership using the call sign EI4CARA. On Sunday the 16th August 2009 the club ran its first official field day on the village green Crossakiel. Conditions both weather and radio wise were poor on the day, but all taking part enjoyed the event, with some short wave listeners showing a keen interest in transmitting.



Paul EI2CA IRTS President presenting the Crossakiel IRTS club membership certificate to Gary EI3GIB

On 14th October 2009 newly elected IRTS President, Paul Martin EI2CA, did the club the honour of delivering our membership in person.

This turned out to be a very enjoyable night with Paul giving a talk on radio in general and taking questions from the members on any issue we chose to raise. All members were impressed with Paul's relaxed attitude and look forward to luring him back to Crossakiel in the near future.

The club continues to meet at the Welcome Wagon in Crossakiel every Wednesday evening from 8.00pm to late. New members, visitors and those interested in studying for their licence are always welcome.

Canadian experiments at 500 kHz authorized

After months of negotiations between Radio Amateurs of Canada and Industry Canada over the details of the licence applications and reporting conditions, the first two licences granted to Canadians for experiments at 504 – 509 kHz in preparation for WRC-12 have been issued by Industry Canada.

Jack Leahy, VE1ZZ, has been assigned call sign VX9PSO in the Developmental Service for his experimental transmissions.

Joe Craig, VO1NA, has been assigned call sign VX9MRC. Joe was mentioned in last weeks bulletin after having the first QSO with Finbar O'Connor EI0CF between Ireland and Canada on this band.

Both of these Canadian stations have been on the air already, with VX9PSO having been reported at 504.6 kHz and VX9MRC at 507.77 kHz.

Signal reports can be addressed to the operators at their call book addresses. Two more authorizations, in Ontario and British Columbia, are expected soon.

EI - VE 500kHz First

Finbar O'Connor EI0CF had a QSO with Joe Craig, VX9MRC.

Joe was on 507.77 kHz and Finbar was on 501.056 kHz. The antenna at EI0CF was a 70 foot vertical with 6 x 50 foot top loading wires.

The respective reports: EI0CF heard in Canada at 559 and VX9MRC heard at 529. The mode was CW, using straight Morse keys. This is the first MF/MF Irish/Canadian contact on the 500 kHz band.

The QSO started at 2235z and ended at 2244z.

Finbar was the marine operator at Malin Head marine station who 'signed off' 500KHz when Ireland ended keeping a listening watch.

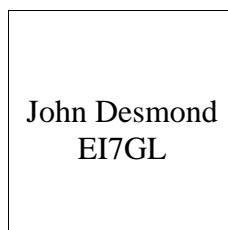
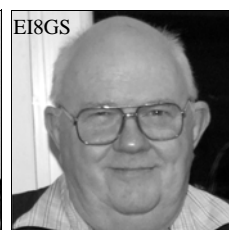
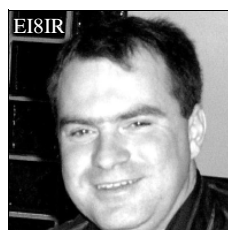
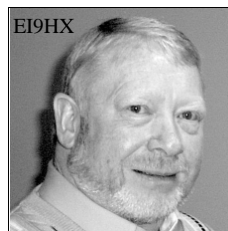
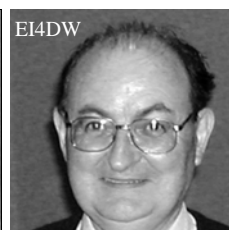
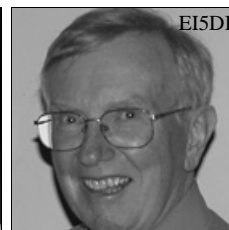
15th World ARDF Championships

The Croatian Amateur Radio Association is pleased to invite ARDF competitors as well as guests from all over the world to 15th World ARDF Championships which will be held in Croatia in September 2010.

For more information, see the event's website: <http://www.ardf2010.com/>

IOTA Contest - EI Record Holders

	QSOs	Mults	Score	Year	Island	Posn
<i>Multi-Operator - DXpedition - 24 hour - Mixed - High Power</i>						
EJ2MT	3,029	505	10,202,615	EU-121	Bere Is.	1
<i>Multi-Operator - DXpedition - 24 hour - Mixed - Low Power</i>						
EJ1DD	1,441	252	2,262,708	EU-121	Clare Is.	?
<i>Multi-Operator - Fixed - 24 hour - Mixed - High Power</i>						
EI7M	2,632	417	6,194,952	EU-115		11
<i>Single Operator Unassisted - DXpedition- 24 hour - Mixed - Low Power</i>						
EI9JQ	788	161	884,856	EU-115		4
<i>Single Operator Unassisted - Fixed - 24 hour - Mixed - High Power</i>						
EI5DI	1,052	190	1,243,718	EU-115		2
<i>Single Operator Unassisted - Fixed - 24 hour - Mixed - Low Power</i>						
EI4CF	628	101	336,936	EU-115		2
<i>Single Operator Unassisted - Fixed - 24 hour - CW - High Power</i>						
EI4BZ	660	115	477,480	EU-115		16
<i>Single Operator Unassisted - Fixed - 24 hour - CW - Low Power</i>						
					No Entry	
<i>Single Operator Unassisted - Fixed - 24 hour - SSB - High Power</i>						
EI8IR	2,091	217	2,546,061	EU-115		2
<i>Single Operator Unassisted - Fixed - 24 hour - SSB - Low Power</i>						
EI/ON4EI	1,020	118	661,272	EU-115		1
<i>Single Operator Unassisted - Fixed - 12 hour - Mixed - Low Power</i>						
EI8GS	970	94	446,124	EU-115		2
<i>Single Operator Unassisted - Fixed - 12 hour - CW - High Power</i>						
EI4DW	382	76	181,944	EU-115		29
<i>Single Operator Unassisted - Fixed - 12 hour - CW - Low Power</i>						
EI4CF	511	108	365,148	EU-115		4
<i>Single Operator Unassisted - Fixed - 12 hour - SSB - High Power</i>						
EI7GL	424	151	612,456	EU-115		8
<i>Single Operator Unassisted - Fixed - 12 hour - SSB - Low Power</i>						
EI4GXB	380	112	380,352	EU-115		2
<i>Single Operator Assisted - Fixed - 24 hour - Mixed - High Power</i>						
EI2JD	1,620	290	2,909,280	EU-115		1
<i>Single Operator Assisted - Fixed - 24 hour - Mixed - Low Power</i>						
					No Entry	
<i>Single Operator Assisted - Fixed - 24 hour - CW - High Power</i>						
					No Entry	
<i>Single Operator Assisted - Fixed - 24 hour - CW - Low Power</i>						
EI9ES	216	88	163,680	EU-115		1
<i>Single Operator Assisted - Fixed - 24 hour - SSB - High Power</i>						
EI9HX	1,200	154	1,177,176	EU-115		2
<i>Single Operator Assisted - Fixed - 24 hour - SSB - Low Power</i>						
EI7JR	121	44	46,068	EU-115		4
<i>Single Operator Assisted - Fixed - 12 hour - Mixed - High Power</i>						
EI3IO	584	109	456,492	EU-115		235
<i>Single Operator Assisted - Fixed - 12 hour - Mixed - Low Power</i>						
					No Entry	
<i>Single Operator Assisted - Fixed - 12 hour - CW - High Power</i>						
					No Entry	
<i>Single Operator Assisted - Fixed - 12 hour - CW - Low Power</i>						
EI9ES	50	18	6,804	EU-115		4
<i>Single Operator Assisted - Fixed - 12 hour - SSB - High Power</i>						
					No Entry	
<i>Single Operator Assisted - Fixed - 12 hour - SSB - Low Power</i>						
EI3HA	167	56	71,736	EU-115		788



Islands on the Air 2009 Contest

EI/GI Results

Position in Category	Call Sign	IOTA Ref	QTH	QSOs	Multipliers	Score
<i>IOTA DXpedition, Multi-Operator, Mixed Mode, 24 Hour, High Power</i>						
8	EJ0GI	EU006	Inis Oirr	2,156	361	4,938,480
9	GI0MPG	EU122	Rathlin	1,739	302	3,115,734
18	GI0ADX	EU122	Rathlin	1,073	170	985,830
<i>IOTA DXpedition, Multi-Operator, Mixed Mode, 24 Hour, Low Power</i>						
8	EJ1DD	EU121	Clare Is.	1,441	252	2,262,708
<i>IOTA DXpedition, Single-Operator Unassisted, CW, 12 Hour, Low Power</i>						
7	EJ/DL5CW	EU007	Blaskets	36	2	432
<i>IOTA DXpedition, Single-Operator Unassisted, Mixed Mode, 24 Hour, Low Power</i>						
5	EI/DK2AT/P	EU115	Ireland	338	48	80,352
<i>IOTA Fixed, Single-Operator Assisted, CW, 24 Hour, Low Power</i>						
2	EI9ES	EU115	Ireland	192	57	81,396
<i>IOTA Fixed, Single-Operator Assisted, SSB, 24 Hour, High Power</i>						
2	EI9HX	EU115	Ireland	1,200	154	1,177,176
<i>IOTA Fixed, Single-Operator Assisted, Mixed Mode, 24 Hour, High Power</i>						
1	EI2JD	EU115	Ireland	1,620	290	2,909,280
<i>IOTA Fixed, Single-Operator Unassisted, SSB, 24 Hour, High Power</i>						
9	EI6GGB	EU115	Ireland	43	24	11,736
<i>IOTA Fixed, Single-Operator Unassisted, Mixed, 12 Hour, High Power</i>						
6	GI4GTY/P	EU115	Ireland	637	62	192,882
<i>IOTA Fixed, Single-Operator Unassisted, CW, 12 Hour, Low Power</i>						
4	EI4CF	EU115	Ireland	511	108	365,148
<i>IOTA Fixed, Single-Operator Unassisted, CW, 24 Hour, Low Power</i>						
9	GI4BQI	EU115	Ireland	68	41	29,520
<i>IOTA Fixed, Single-Operator Unassisted, SSB, 24 Hour, Low Power</i>						
1	EI/ON4EI	EU115	Ireland	1,020	118	661,272
9	GI4JTF	EU115	Ireland	141	60	76,500
<i>IOTA Fixed, Single-Operator Unassisted, SSB, 12 Hour, Low Power</i>						
2	EI4GXB	EU115	Ireland	380	112	380,352
5	MI0SAI	EU115	Ireland	508	64	160,512
12	GI4AAM	EU115	Ireland	159	51	63,495
30	GI0OUM	EU115	Ireland	53	21	8,631

Checklog submitted by **MI1SJM**

The final results for the 2009 Islands On The Air Contest have now been published. These results show that over 2,000 logs were submitted - a record figure for this contest. 20 EI and GI stations submitted logs.

The highest EI/GI score was achieved by EJ0GI - South Dublin Radio Club and the City of Belfast Radio Amateur Society - who operated from Inis Oirr. Their score was just under 5 million points, giving them 8th place in the DXpedition, Multi-Operator, Mixed Mode, 24 Hour, High Power category.

GI0MPG, operating from Rathlin Island, were placed 9th in the same category, with 3.1 million points. Meanwhile, the Dalkey Island Contest Group (EJ1DD) - operating from Clare Island and in the Low Power category - were placed 8th in this category, with over 2.2 million points.

Other Irish stations achieving in excess of one million points were Thos EI2JD, with 2.9 million points to win his section and Pat EI9HX, with 1.2 million points who was second in his section.

EI/ON4EI won his section with a score of 661,272 points. EI4GXB and EI9ES both finished as runners up in their sections.

The highest overall score was achieved by the Slovak Contest Group operating in Sardinia, followed closely by the Bristol Contest Group operating from Jersey.

The link to the full results is

<http://iotacontest.com/contest/iota/2009/finalScore.php>

Three People Killed While Erecting Antenna

At approximately 8:40 PM on Monday, October 12, a man, woman and their 15 year old son were killed while trying to erect a 50 foot vertical antenna at the home of the man's mother, Barbara Tenn, KJ4KFF, in Palm Bay, Florida. The deceased were not licensed amateurs.

"It happened in an instant," Palm Bay Fire Marshal Mike Couture said in a statement. "It is an unfortunate set of circumstances that led to the most tragic result."

According to police reports, Melville Braham, 55, Anna Braham, 49, and their 15 year old son Anthony were putting up an antenna -- Tenn's second -- at night when they lost control of the antenna and it crashed into nearby overhead power lines. The impact sent 13,000 volts of electricity through the pole the three were holding.

A family friend, a 17 year old boy, was on the roof at the time of the accident. He and the couple's daughter, who was in the house at the time, were not injured.

The mother was pronounced dead at the scene. When paramedics arrived, the father and son were not breathing; rescue crews immediately tried to resuscitate them. They were transported to a hospital where they later died.

Neighbor Jim Vallindingham told television station WFTV that he called 911 when he saw the fire in the back yard and then he ran over:

"I had no idea it was electrical until we got over there and saw the three people laying on the ground. So I called 911 a second time to tell them there were casualties.

You know, there were people on the ground. So [the 911 operator] told me that's electric, you back away don't touch anything."

Couture said that night was not the best time to be attempting to put up an antenna. "It wasn't the best time, meaning it was night time. Obviously, in darkness, and trying to do something like this and not being keenly aware of where the power line is in the backyard, [was not a good idea]," he said.

Neighbours said that Tenn, an ARRL member, used Amateur Radio to talk with her family in Jamaica.

Thanks to ARRL News.



Getting started with Amateur Radio Satellites

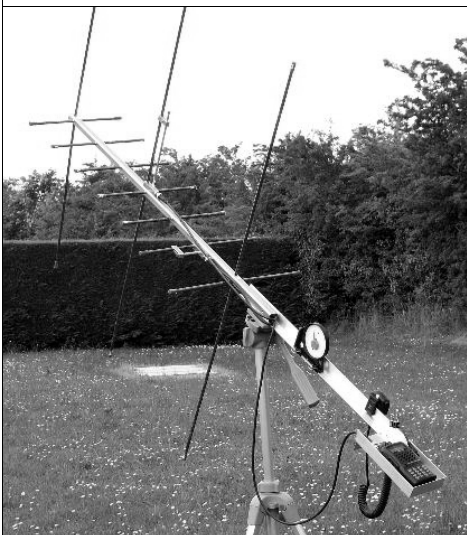
by Charlie Carolan EI8JB

I first ventured into the world of Amateur Radio Satellites not knowing anyone personally who was active with the birds (Satellites) who could give me some tips and advice. Without a mentor I looked on the Internet and found lots of information including videos about Amateur Radio Satellites on www.youtube.com

My interest was peaked when I realised that it was possible to successfully operate on the satellites with equipment that I had already...a dual band VHF/UHF HT! This article for Echo Ireland will provide some basic information for anyone that would like to experiment with Satellites and is in response to some queries I have had in relation to how to go about getting into the world of Amateur Radio Satellites. In this article I concentrate on that category of FM LEO, Low Earth Orbiting Satellites and the basic equipment required to operate as a portable station, some of which you may have on hand already!

The big advantage about operating via Satellite is that they are on a scheduled pass, usually between 6-16 minutes and orbit the Earth every 100 minutes +/- . In general it is possible to have a selection of various passes over Ireland each day, from the various Satellites in this category. The most common Satellites from the FM LEO's to experiment with for the first time using FM are AO-51, AO-27 and SO-50.

Satellites use both Uplink Tx and Downlink Rx frequencies much like a land based repeater. However, both frequencies are located on different bands, most common would be 2m & 440 etc.



A dual band HT that can cross band Tx/Rx like the FT60R is ideal, however, it also possible without a dual band unit to at least have Rx available on another HT. This is not simple and if you plan on using a HT for Tx and another for Rx, this requires some gymnastics between pointing both antennas in the direction of the satellite, adjusting memories to compensate for Doppler while trying to QSO & log at the same time etc.

So for portable operation if you have a suitable dual band HT it's the way to go.

As an example, the AO-51 Satellite, known by its callsign Echo is a 25cm cube, although it can't be seen, it can be heard very clearly! Its orbit is between 600-750kms above the Earth. Please don't be overwhelmed with this information as it actually makes tracking the satellite very easy. Once you have a general direction to point your antenna, this is where a directional antenna comes into use to help you track the Sat across the sky.

There is no need at this point to start worrying about Keps or Keplerian elements, the mathematical calculations that give you the information required to find and track a satellite on its pass.

With just basic information like grid square or GPS co-ordinates you can enter it into the Amsat.org website you can get a listing of up to 50 passes from Amateur Satellites over your location.

I would suggest checking out the individual satellite link either independently or via the AMSAT website to confirm that the satellite ground stations have the satellite working in the mode you are trying to receive it on!

A lot of unsuccessful satellite attempts that get put down to 'its too difficult and too hard to hear Sats' fail due to the fact that although the pass has been confirmed either to be the same local time as the database displays, either computer clocks are not accurate and up to date or the mode has been changed by the ground stations.

Please check the mode is in use before trying to Rx. This can be as simple as listening for a beacon on a certain frequency or checking an updated site via the internet. This information can be obtained also again by checking out the satellite listings on the AMSAT website.



When you go to www.amsat.org and click on the passes button and in the drop down box you will see a selection of satellites, select AO-51 for example and input either your grid square or GPS co-ordinates and you will get the information required to help you Rx the satellite. If you using a directional antenna at least you will know where to start pointing it to start receiving signals from the satellite. Please also note that initially it's a weak signal exercise and you will need to have the squelch open on your radio. I know this gets a little noisy at first but noise can be your friend! Once you start to experience quieting you are sure you are receiving the satellite and once you have Rx'd the satellite you can adjust how you hold your antenna to keep it in full quietening.

If you do not know your co-ordinates or grid square, you can get an idea by opening up Google Earth on your PC and pointing the mouse arrow over when you plan on operating from, you will then see the co ordinates displayed along the border in Google Earth.

To use the above information to find your grid square just input the details into <http://www.arrl.org/locate/grid.html> and you will be given your Grid Square. Like anything in this area involving the Internet and making life easy, there are other options to use to find the above information also.

After confirming that a pass is overheard

and as you start Rx on the first set of frequency pairs. If hearing the satellite at this point you will be experiencing the effects of Doppler on the Rx signal with the frequency changing as the satellite approaches overhead and passes, much like hearing a siren on an emergency vehicle and notice the sound (frequency) change as it approaches and passes. It is quite common to have a selection of frequency pairs programmed into your transceiver to accommodate this. I have included some frequency pairs with this article, more updated and detailed information can be obtained via the internet for other satellites. Keeping in mind you are looking for a quieting signal, you will figure out when to adjust the memory you have programmed to the next frequency pair in memory to Rx the sat with less squelch etc.

Although it is possible to work on a dual band HT antenna, it is common to use a higher gain antenna other than the rubber antenna that you may have received with your HT.

Please note the photo of Tom TF/N2YTF taken by his XYL just after he finished his first QSO with myself while he was on holiday in Iceland.

On our first QSO Tom was using a Diamond SRH-940 whip with his Kenwood TH-D7AG. Tom had been active from other Icelandic squares also with his Arrow II portable Yagi and HT. He was the first TF station in many NA and European logs, and I don't believe anyone from TF has been heard via satellite since, so it is a small niche group.

Although there are many combinations of radio and antenna for portable satellite use, success can also be had by home brewing portable satellite antennas. There are many designs to choose from and experiment with and you will find one that's suitable for you once you figure out what's best with having to point the antenna in the direction, key the radio and possibly log the QSO's, or record for logging later.

Working satellites/P can be very enjoyable, it gets you outdoors operating from various grid squares etc. It is a suggestion for someone trying to work a satellite for the first time to try a pass during the week or early morning etc as, occasional pile-ups are common over weekends and evenings on the downlink frequencies. FM satellites use a single Tx & Rx frequency pair so it can get crowded sometimes, unlike their SSB & CW relatives that have a selection of pass band to use. This may put some operators off but because

passes can be determined in advance it is possible to build your own operational schedule around what works best for you. From the satellites listed above, AO-27 has the shortest pass of only 6-7 minutes before going into a data/recharging mode. It's a great satellite to use, we are just situated in the wrong area on Earth to get full use of it.

Because of the altitude of the satellite when orbiting looking down on Earth it has a great view commonly called a footprint. The size of footprint varies due to the altitude of the particular orbit, the higher the orbit the bigger the footprint much like shining a torch against a wall; the closer to the wall you are the smaller the beam of light is, and the further away you are the larger the beam is etc.

It is possible to work into Canada and the USA from Ireland on certain transatlantic passes, also islands in the Atlantic, Azores Madeira & Canaries etc and Europe, Scandinavia and the Mediterranean. Not bad for 5w and a handheld on FM!! These can also be worked with less power also.

Most satellite QSO's are relatively short, with just an exchange of callsigns, signal reports and locator squares. Any additional information required can be obtained via the QRZ.com website such as operators name, equipment etc. It is also recommended that users of the QRZ.com input their locator square in their info fields to allow stations who may have missed the locator on the air to have it listed.

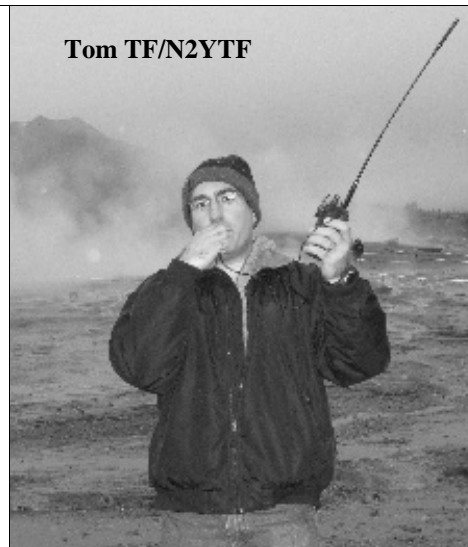
Operators on this mode become popular very fast, especially if they are located in EI where there are only a small number of active satellite operators. I have only heard two other operators on the FM LEO's the past six months regularly from Ireland. Other active users are Dermot EI4ESB and Thomas EI3AL. We are situated in an ideal location to work the above satellites as we are either first into the footprint or last out of it, depending on the track of each pass etc.

I hope this item sparks some interest amongst interested amateurs and SWL's and if I can be of any assistance in either getting you started or arranging a demo for a group etc please contact me.

My portable satellite station consists of the following; a Yaesu FT 60r Dual Band HT 5w with extension speaker, mic and Arrow II Portable Yagi with tripod.

I hope to provide more detailed information in future issues of Echo Ireland look-

Tom TF/N2YTF



How I have programmed my FT-60R for **AO-51**:

Ch #	Name	TX Freq	RX Freq
101	51 -2	145.920	435.310
102	51 -1	145.920	435.305
103	51 MID	145.920	435.300
104	51 +1	145.920	435.295
105	51 +2	145.920	435.290

Here's how I have programmed my HT for **SO-50**:

Ch #	Name	Tx	CTCSS Rx	CTCSS
201	50 -4	145.850	67.0	436.815 None
202	50 -3	145.850	67.0	436.810 None
203	50 -2	145.850	67.0	436.805 None
204	50 -1	145.850	67.0	436.800 None
205	50 74	145.850	74.4	436.795 None
206	50 MID	145.850	67.0	436.795 None
207	50 +1	145.850	67.0	436.790 None
208	50 +2	145.850	67.0	436.785 None
209	50 +3	145.850	67.0	436.780 None

Please note the 74.4 CTCSS tone is required to 'Switch On' the timer aboard the SO-50 Sat. Once switched on it will be on a 10 minute timer, the 67.0 tone will be required also to access this satellite.

ing at each satellite in this category and its various modes available etc. There are various satellite prediction software programs available for download on line, also stand alone sites that can give you basic or limited satellite pass data without having to download anything. Please also note that if you are looking at a satellite approaching via the internet on your PC its accuracy on your monitor will be increased with a reasonably fast pc and internet connection.

I can be contacted via my IRTS News details if you have any queries about trying satellite work or would like to try to organise a demo for a group etc.

I hope you find it useful and will have an enjoyable experience.

I am looking forward to meeting more EI's on satellite soon.

73, Charlie EI8JB

Nobel Prize Centenary: Guglielmo Marconi

By Ita Marguet, December 2009

Michael Sexton's book **MARCONI: The Irish Connection** adds to the vast corpus of professional and other literature about the pioneer of radio communication and inventor of the first practical system of wireless telegraphy. With appendices and bibliography it provides sketches, drawings, maps and photographs.

From a young age **Guglielmo Marconi** (1874-1937) developed a passion for the sciences and studied physics at the technical institute of Livorno and the University of Bologna.

The book provides commentary on what Marconi's technical experiments and achievements meant to Irish society. Its foreword recognizes ... *that Marconi was more of a genius at spotting the potential that could be harnessed from the application of existing knowledge than he was an original inventor.*

Marconi had an Irish mother, Annie Jameson, and married Beatrice O'Brien, daughter of Lord Inchiquin. Sexton's study traces Marconi's Irish and Italian family connections, and his work in Ireland, in particular the installations of his radio signalling stations at Crookhaven, Ballybunion and Clifden, which in 1907 was the most advanced station of its kind in the world.

International Marconi Day is celebrated on 25 April to coincide with the date of his birth in 1874. He died in Rome on 20 July 1937 when two minutes of silence were observed on radio waves worldwide as homage to the man who became known as 'Father of Radio'.

Centenary celebrations (1894-1994)

The book's Epilogue recalls how the direct link between Ireland and the Marconi family took on a new and different lease of life in 1994, when Princess Elettra, Marconi's youngest daughter by his second marriage, arrived in Ireland together with the President of the Fondazione Guglielmo Marconi, Professor Gian Carlo Corazza. In addition, a delegation of fifteen arrived from Bologna itself, representing various relevant elements of the city, councillors, journalists, educationalists, etc.

The highlight of the visit was a seminar organised by RTE, in association with the Istituto Italiano di Cultura, Dublin, mainly concerned with various aspects of the consequences of Marconi's great invention 100 years previously with emphasis on his involvement in Ireland.

A replica of the first Marconi spark transmitter was actually fabricated by Mr. Paddy Clarke of RTE specifically for the celebration.

In June 1995 a major gathering took place in Clifden in the presence of Princess Elettra, who unveiled a plaque at the site of the wireless station at Derrygimla, which was followed by lectures both in Clifden and Galway.

The Italian Navy also participated on this occasion, recalling Marconi's naval involvement.

In June 1998, Princess Elettra returned again to visit and unveil commemorative plaques at the extreme ends of Ireland, namely Ballycastle, Co. Antrim, and Crookhaven, Co. Cork.

Nobel Prize Centenary (1909-2009)

The experiments and achievements of **Guglielmo Marconi** have been widely recognised by the award of many national and international degrees and distinctions.

In 1909 he shared with the German physicist Karl Ferdinand Braun, the **Nobel Prize in Physics** for important radio communications. Before a distinguished audience, including the King of Sweden, Marconi delivered his **Nobel Lecture** at the Royal Academy of Science, Stockholm, on 11 December 1909.



Guglielmo Marconi
1874-1937

When accepting the **Nobel Prize in Physics**, Marconi stated ...

In sketching the history of my association with Radiotelegraphy I might mention that I never studied Physics or Electro technics in the regular manner, although as a boy I was deeply interested in those subjects.

I did however attend one course of lectures on Physics under the late Professor Rosa at Livorno, and I was, I might say, fairly well acquainted with the publications at that time dealing with scientific subject including the works of Hertz, Branly and Righi ...

A facsimile of the typescript of the complete lecture with annotations by the author has been published by the Fondazione Guglielmo Marconi, Villa Griffone, Via Celestini, I-40044, Pontecchio (BO), Italy.

Note: Acknowledgement is given to all sources used in preparation of this text including **Marconi: The Irish Connection** by Michael Sexton, 2005.

It follows printed articles entitled **Wireless telegraphy:** Switzerland and Ireland (2004), **Ireland and Wireless Telegraphy** "Wavelengths of time" (2005), **Salvan: Cradle of Wireless:** Guglielmo Marconi (1874-1937) (2006), **Guglielmo Marconi:** "Telecommunication Heritage" (2009), by Ita Marguet.

Marconi Nobel 100 Award

To celebrate the 100th anniversary of Marconi receiving the Nobel Prize, a special award will be issued for working or hearing 10 different (5 for DX) special event 'SI' stations between November 9th and December 10th.

The following special anniversary callsigns were on the air: SI0GM, SI1GM, SI2GM, SI3GM, SI4GM, SI5GM, SI6GM and SI7GM.

Other SM stations may be using the special prefix SI, but only the above stations count.

Each anniversary station counts once per band.

No endorsements. More details via qrz.com

EI's on EQSL

(as at December 1st 2009)

Updates and enquiries to Thos EI2JD at thoscaffrey@hotmail.com

DXCC Confirmed			Worked All Zones
207 EI7BA (+5)	46 EI1429 (+4)	40 EI4CF	
174 EI3IO (+1)	44 EI4GMB (+4)	40 EI9FBB	
162 EI4CF	43 EI7IM	40 EJ9FBB	
156 EI2JD (+1)	43 EI7IS	39 EI7BA	
154 EI9FBB (+2)	42 EI5IX	39 EI9HX	
150 EJ9FBB	41 EI3EBB	38 EI2JD	
148 EI9HX	41 EI4JR	37 EI3IO	
147 EI6IZ	39 EI6IF	37 EI8GS (New)	
144 EI0CZ	39 EI9EW	34 EI9JU (+2)	
140 EI7CC	34 EI1KARG	33 EI3GYB (+1)	
115 EI3GYB (+3)	34 EI3JB	33 EI7CC	
115 EI8GS (New)	33 EI1571	32 EI4BZ (+1)	
111 EI9JU (+10)	33 EI6GGB (+5)	31 EI5IF	
110 EI6AL (+2)	32 EI7GM	31 EI6AL	
108 EI9FVB	32 EI90GPO	31 EI6JK	
104 EI4GXB	27 EI3GDB	30 EI4GXB (+2)	
102 EI6JK	25 EI2FS	30 EI9FVB (New)	
101 EI4BZ (+3)	24 EI7IW	29 EI9O (+5)	
99 EI9HQ(+1)	22 EI/G4DDL	28 EI4GMB	
98 EI8IU (+1)	20 EI0CPL	25 EI0W	
97 EI6HB	20 EI2IV	25 EI5GUB (New)	
97 EI8FH (+1)	20 EI4DIB (+1)	22 EI7JN	
93 EI1DG (+2)	18 EI4HX	10 EI1429 (New)	
92 EI5IF		07 EI4HX	
92 EI7DAR (+11)		06 EI4DIB	
92 EJ9HQ	Worked All States	06 EI7IW	
91 EI0W (+8)	50 EI4CF		
86 EI9ES	50 EI8GS (New)		
87 EI4GNB (+2)	50 EI9FBB	Worked Prefixes	
82 EI9O (+5)	50 EJ9FBB	1,165 EI4CF (+67)	
81 EI5GM	50 EI9HX	1,012 EI2JD (+54)	
77 EI7IX	49 EI9HQ	859 EI8GS (New)	
74 EI8JR (+3)	49 EJ9HQ	755 EI3IO	
73 EI3HA	47 EI2JD (+2)	788 EI9FBB (+38)	
71 EJ3HA	47 EI3IO	741 EI9HQ (+34)	
71 EI4HQ (+4)	47 EI6HB	709 EI0W (140)	
71 EI5GUB (New)	45 EI4BZ	698 EI7DAR (98)	
69 EI2II	45 EI4IS	608 EI7CC	
69 EI8GP	45 EI7BA (+1)	586 EI7BA	
68 EI/DH0GSU/p	45 EI7JN (+2)	546 EI4BZ	
68 EI5GJB (+9)	45 EI8GP	535 EI9FVB (+9)	
68 EI9CF (+1)	44 EI5GM	514 EI4GXB	
67 EI4HH	44 EI9JU (+3)	482 EI6JK	
65 EI7M	44 EI9O (+4)	453 EI9JU	
65 EI8DD	41 EI0W (+5)	371 EI5GM	
65 EI8DL	41 EI4GNB (+1)	348 EI5IF	
61 EI4IS	41 EI7DAR (+4)	299 EI8GP	
60 EI7JN	38 EI5IF	293 EI8IU	
60 EI7BFB (+3)	36 EI9HW	291 EI9JM	
60 EI9JM	35 EI7CC	272 EI9O (+62)	
58 EI6IL	32 EI6JK	245 EI5GUB (New)	
58 EI9JF	31 EI4GMB (+1)	213 EI7JN	
57 EI5GSB (+10)	30 EI4GXB	200 EI4GMB	
57 EI8JK	30 EI9ES	166 EI8DL	
56 EI7BMB	29 EI9FVB	75 EI1429	
55 EI2GLB (+3)	27 EI5GUB (New)	52 EI7IW	
54 EI7IQ	26 EI6AL	31 EI4HX	
53 EI6ARB	26 EI9JM	30 EI4DIB (+17)	
52 EI6CPB	3 EI4DIB		
50 EI6AK	2 EI7IW	Further information	
49 EI2FSB		on www.eqsl.cc	

EI DXCC Listings

(as at November 30th 2009)

Mixed			
353 EI8H	265 EI6FR	17m	
351 EI6S (+1)	229 EI4BZ	242 EI7BA (+12)	
347 EI7CC	219 EI9FBB	189 EI9FBB	
341 EI6FR	214 EI6IZ (+4)	107 EI3IO	
340 EI2GS	184 EI2JD	105 EI6IZ (+3)	
321 EI3IO	178 EI9JF	15m	
312 EI7BA (+7)	134 EI8IU	215 EI7BA (+11)	
306 EI2HY	119 EI7GY (+12)	188 EI3IO	
284 EI9FBB	109 EI2IH	181 EI9FBB	
269 EI2CR	109 EI4HM	171 EI4BZ	
262 EI2GX	107 EI/GM4ARJ	136 EI2JD	
253 EI2JD	106 EI1DG	109 EI8GS	
248 EI9JF	100 EI6AL	108 EI3GV	
240 EI4BZ		103 EI9FVB	
230 EI6IZ (+5)	RTTY/Digital		
210 EI6IL	111 EI6FR (+3)	12m	
205 EI5GM	102 EI6HB	151 EI7BA (+4)	
200 EI9FVB		100 EI9FBB	
189 EI8IU	Satellite - No Entry		
152 EI6HB		10m	
141 EI9O	160m	250 EI3IO	
140 EI4GXB (+40)	195 EI3IO	180 EI7BA (+7)	
134 EI9HQ	135 EI7BA (+4)	156 EI4BZ	
133 EI7GY (+12)	100 EI6IZ (New)	144 EI7GL	
128 EI8HA		131 EI2JD	
103 EI6AL	80m	128 EI4GK	
	298 EI6S	119 EI9FBB	
	192 EI7BA (+8)	104 EI8GS	
	171 EI9FBB		
	126 EI3IO	6m	
	110 EI4BZ	157 EI3IO	
	108 EI2JD	111 EI7GL	
		101 EI3EBB	
	40m		
	222 EI7BA (+12)	2m No entry	
	204 EI9FBB		
	167 EI3IO	QRP DXCC	
	145 EI2JD	No Entry	
	129 EI4BZ		
	127 EI6IZ	DXCC Challenge	
	117 EI7GL	1,812 EI7BA (+90)	
		1,521 EI7CC	
	30m	1,463 EI9FBB	
	215 EI3IO	1,699 EI3IO	
	202 EI7BA (+15)	1,258 EI6FR	
	136 EI6IZ (+4)	1,030 EI2JD	
	133 EI9FBB		
	110 EI4BZ	DXCC Honor Roll	
	20m	Mixed	
	262 EI9FBB	338 EI6FR/341	
	256 EI7BA (+11)	335 EI2GS/340	
	243 EI3IO	335 EI6S/351	
	182 EI2JD	335 EI7CC/347	
	170 EI4BZ		
	150 EI9JF	Phone	
	139 EI6IZ (+4)	334 EI6S/348	
	139 EI9FVB	333 EI2GS/338	
	111 EI8GS	333 EI7CC/345	
	110 EI3GV	329 EI8EM/334	
	105 EI9HQ		
		Comments/corrections	
		to ei4bz@eircom.net	
CW			
314 EI7CC			
294 EI7BA (+9)			

Galway VHF Group Operation from County Galway Lifeboat Stations November 2009

The idea for the Lifeboat operation was conceived at a meeting of the Galway VHF Group last September.

Lifeboat crew-member, Mark Armour EI6GUB had just completed his first year probationary training for the Lifeboat Service and wanted to run a fundraiser for the RNLI with Amateur Radio operation as the basis.

This year was the 185th year since the establishment of the Lifeboat service in Ireland and a tentative enquiry to ComReg resulted in the call-sign EI185RNLI being issued.

Initially, the idea was to operate from the Galway Lifeboat Station for a 24 hour period, but it was decided that a better challenge would be to operate from the three stations located in County Galway for 24 hours over three weekends.

The basic idea was to operate two HF stations simultaneously, one on 160, 80 or 40m and the other on 40 or 20m. Antennas were another consideration in that there had to be sufficient space for LF doublets especially with 160m operation as part of the equation. VHF was not considered in this instance as it would serve no useful purpose.

The only Lifeboat station that was easily accessible at short notice was the one in Galway City - on our doorstep.

Galway Lifeboat Station.

The Galway Lifeboat station operation took place on the 7th and 8th of November 2009.

A pre-cut 20m dipole was hoisted aloft from the flagpole on the lifeboat station and the other end was secured to a line from a very tall lamp post opposite. Once the 20m station was activated, work commenced on the 160m doublet. The doublet was constructed from scratch in record time and 300 ohm ladder line was

soldered to the centre support. The centre was then hoisted to a good 50 feet on the mast of the Lifeboat Station. One end of the doublet was then secured to the mast on the Harbour Master's building and the other end to a lamp-post putting the antenna at 50 feet over ground.

Quite a pile up developed on 20m, presumably with the assistance of information placed on the DX Cluster and of course the callsign EI185RNLI had created quite an interest.

Some activity was also generated on CW and PSK mode later on in the day. The doublet, for the second station, was tuned up on 40m and many stations were worked giving good signal reports.

The LF bands were a little more relaxed with the majority of stations coming in from the UK, Ireland, and Germany.

As the day wore on 20m began to fade out and the operators then re-tuned to 40m.

At this point the LF station tuned to 80m resulting in steady flow of callers. It was evident that the noise levels on all bands were becoming stronger as darkness fell. As the evening wore on the LF station was retuned to 160m with excellent results being obtained from the doublet antenna. A large number of stations from the UK, and well into Europe, were worked at good signal strengths.

Close down was at 0200 with a view to an early start in the morning.

20m was very lively at an early hour with 40m being operated simultaneously by the second station and also yielding good contacts. At 1130 the 40m operation switched to 80m to accommodate the local operators in Ireland around and after the IRTS radio news.

Sadly, operations had to cease at 2 pm as there was a Lifeboat training exercise taking place and the station had to be cleared for the debriefing session.

Special thanks to Gerry EI8DRB, Joe EI3IX, Enda EI3IS, Ger EI6DP, Tryg EI7CLB, Mark EI6GUB, Arthur EI7GMB, Steve EI5DD and Ger EI6DP for their assistance with the operation and not forgetting the personnel from the Lifeboat Station for allowing us to use their facilities.



Aran Islands Lifeboat Station 14th and 15th November.

On this occasion the operation was running blind with no information about the station to hand. Two operators decided to take a boat trip to the Island on the Friday evening with a view to setting up ready for Saturday morning.

On arrival the weather took a turn for the worse and there were gale force winds and heavy rainfall. It was decided that the better option would be to wait for daylight before setting up antennas.

The Lifeboat Station on Inis Mor Island is located just a few minutes from the pier.

A radio mast was located around the back of the station and holiday apartments were located above the station. There was plenty of scrubland behind the Lifeboat station and the practical configuration for the 160m antenna would be in the form of an inverted -V.

The 20m antenna was strung from a balcony to a Sycom fibreglass mast.

A Yaesu FT 847D was used on 20m. The prefix for an Irish offshore island is EJ so EJ185RNLI generated a huge following combined with the fact that IOTA number EU-006 was also of interest to DXers. The DX cluster must have been buzzing with reports.

Whilst this was going on, the inverted-V doublet was erected. The tower had a skirting arrangement to prevent individuals climbing it and, as there were no ladders to be found, the only way around this problem was to catapult a line with a lead ball through the tower to hoist the centre-



Steve EI5DD operating the Galway station

(Continued on page 31)

(Continued from page 30)

piece of the doublet. It worked first time and the centre of the doublet was hoisted to about 45 feet and the two legs of the doublet were secured to fence posts at each end.

The antenna went up very quickly but a larger problem then became apparent. The 300 ohm ladder line was too short to get back into the station. The feeder just about reached the window but another 20 feet were required to bring it into the shack. There were no extra lengths available and the nearest source of this feeder was back home on the mainland. This was job for McGyver!

Two lengths of wire were cut from a reel of antenna wire and then strips of super-tape were wrapped every two inches along the wire to hold the wire apart at approximately the same distance as on the 300 ohm line. After some time, something resembling the 300 ohm line had been constructed and was soldered to the end of the existing line. After attaching the new section to the ATU, the antenna appeared to tune perfectly and the Yaesu FT 897D was operating quite happily with this arrangement. Reports were good on 40m and so the operation commenced on the LF bands. Probably not the perfect solution but it worked.

A steady flow of stations resulted from the first CQ call on 40m. The EJ prefix along with the RNLI call-sign generated huge amount of interest.

Operation switched to 80m towards 1700 and continued until 1800 followed by 160m. A continuous stream of stations called in until around 2000 when it was decided to take a break as the 20m activity was beginning to wane.

An excellent meal and a few pints were consumed in one of the local pubs before resuming activity at 10 pm.

On return from the rest and recuperation, 40m was very active and it was not too long before a pile-up developed. The second station was fired up on 160m with good reports coming in.

An RSGB clubs contest was in full swing and the special event call-sign earned a few points for the operators. This resulted in plenty of interest until midnight. Operation was then transferred to 80m and continued until 0100. For some reason 80m activity seemed to fade into foreign speaking stations who were not at all receptive to our operation. A good night's sleep was in order to enable an early start at 0700.

Fortunately, the Lifeboat station was well heated although the flagstone floor was a little uncomfortable.

There was no problem waking up and operations resumed at 0730.

20m yielded a huge number of contacts for the rest of the day. 40m was busy until around 11 am when the operation was switched to 80m to facilitate the Irish operators. The weather was became stormy at this stage and the Sycom fibreglass mast was looking as though it was taking a fair battering but stood up to it well. Seamus O'Flaherty was the person in charge of the Lifeboat Station and had a great interest in our activities. One of the many hats he wears is Aran Islands correspondent to Raidio na Gaeltachta, the Irish Language station for the area.

The lunchtime news featured his report on the 24 hour activity from the Lifeboat Station. This report had been noted by some friends on the mainland.

The operation was terminated at 1500 and gear packed in cases ready for the boat trip to the mainland. There was no wasted space and everything packed into 4 boxes that were easily transported. Despite the stormy conditions the operators fell asleep on the boat and woke up just as it was about to dock on the mainland.

Special thanks to Steve EI5DD and Joe EI3IX who operated on this occasion and not forgetting Seamus O'Flaherty and the Aran Islands Lifeboat Crew for the use of their station.

Clifden Lifeboat Station 28th and 29th of November

Unfortunately no recce had been done on this station and it was an eye opener when the operators arrived. The building was narrow with very little room and definitely not practical for erecting any form of antenna for 160m.

Just as it was accepted that 20 and 40m were going to be the only bands on which to operate, it was discovered that the main boat-house and slip-way was located further down the road.

The boat-house was a better location as there was more space available. The building had a large fibreglass flagpole that looked suitable for hauling up the centre-piece of the doublet but it was found that the rope had slipped off the pulley and there was no way it was going to budge in either direction. A 20 foot galvanised pole was located on to which we lashed the fibreglass Sycom mast.

Cable ties are a very useful addition to the kit! The centre of the doublet was then fixed with cable ties to the fibreglass mast. This arrangement was then lashed to the flagpole with cable ties and a few turns of rope for good measure.

It seemed perfect, but every time the legs of the doublet were moved there were crunching sounds emanating from the fibreglass pole. It was actually beginning to disintegrate! By gently tying off the legs of the doublet to their anchor points it was possible to pull the fibreglass pole into the flagpole and hold it straight. Now it was time to pray that it would stay together.

160, 80 and 40n were to be operated from this location whilst the 20m station was to be set up in the other building just up the road. The 20m operators left Steve EI5DD to continue on setting up the LF station and getting on air. For some reason the antenna would not tune and the problem had to be within the ATU. On opening the MFJ ATU, it would appear that there were a few links between the coils and the inductance switch showing signs of dry joints and one actually fell away during the examination. A quick repair job with a gas soldering iron remedied the problem and the station went on air. The 40m band was alive with activity. There were no SSB contests on this weekend and it was possible to operate with ease. It was obvious that word had got around on the cluster resulting in a continuous stream of callers.

At the second location, the problem of erecting the 20m antenna was solved by stringing the dipole from the building to a lamp post just across the road.

Joe EI3IX, Gerry EI8DRB and Mark EI6GUB set up the 20/40m station. The activity remained on one frequency without any major interference or necessity to move. The sky was clear and the temperature was just above freezing, which meant operating from a boat-house with no heating was going to be tough. By 1600 the group from the 20m station called down with a kettle and some coffee. A great idea, but the better option was to go into Clifden for a meal and some liquid refreshment. Never did a meal taste so good and of course a pint of lager made it even better. After an hour



Gerry EI8DRB and Joe EI3IX operating at Clifden

(Continued on page 32)

(Continued from page 31)

and a half operators were well thawed out and ready for action.

The 80m band yielded many good contacts and the rest of the evening was spent on 160 and 80m until 0130.

The 20m station switched to the 40m band and continued on until midnight.

Temperatures had plummeted and there was a harsh frost developing.

The 80m station was closed down and the operator jumped into the Freelander and turned the heating on full blast. After a good half hour thawing out it was decided that sleeping in the vehicle was the better option.

Operations commenced at dawn and 40m was buzzing with activity. Back in the second location, 20m was fired up and results were encouraging and continued until close down of the station at 0100. The 40m activity continued until 1130 when it was decided to change to 80m to give the Irish operators a chance to call into the station.

Just after the IRTS news, EI185RNLI moved to 3.670 MHz and started to work a few stations when, suddenly, the doors of the lifeboat station burst open and the boat was launched. Once the boat was in the sea the boat trailer was parked outside the boathouse for hosing down to clean off the sea water. This just happened to be right underneath one leg of the antenna. There was absolutely no way that the antenna would tune with the sides of



Enda EI3IS on 80 metres

the trailer almost touching the wire. It was probably not the most tactful idea to ask them to move the trailer under the circumstances.

The decision was taken to close down at this point which was shame, as there were quite a few EI operators seeking the last of the three Lifeboat stations.

The station packed away very quickly but the fibreglass mast fell to pieces as it was being taken down. Sadly it was not repairable. It had given great service over the years and taken much abuse but

probably it becomes brittle with age and maybe the low temperature did not help matters either. Definitely this mast had been a valuable addition to portable operation in the past and another will be procured for future operations.

Ham Radio Deluxe.

Ham radio deluxe was used for logging throughout the RNLI activities. It does not take too long to adapt to this electronic logging program. One of the advantages of interfacing the program to the radio was that the frequency in use was always inserted into the log and, every time the band was changed, it changed in the log entry. Basic rig control was available although seldom used for phone contacts.

If there is an internet connection it will automatically fill in the received station's details by doing a lookup in QRZ.com. Most of our operators seemed happy enough with the program, whilst others seemed to develop a blind spot to it and preferred paper logs. Sadly this would preclude them from contest operation where computerised logging is essential. Another feature of Ham Radio Deluxe was the DM780 digital modes package that was extremely versatile, allowing operation on most of the digital modes and SSTV.

Overall a simpler logging program could have been used as Ham Radio Deluxe has a lot of frills more suited to base station operation.

In Conclusion

It would have been a good idea to bring along a vertical antenna for 80, 40 and 20 metres in case there were space limitations. Erecting a beam antenna from the RNLI stations would have been most impractical under the circumstances and the choice of the 160m doublet was obviously the best although, without plenty of space, it would not have been possible to use it to full potential.

Definitely, it is most essential to check out locations before running blind only to find that it is not possible to erect antennas. We were lucky this time!

Equipment and toolkits were streamlined to the last and only essential items were brought along. On reflection it would have been no harm to bring additional coax or 300 ohm feeders to be on the safe side. Cable ties are an essential item on the list as they can hold anything in place and even act as insulators if necessary. A sizeable gas soldering iron is also required for antenna work in the "great outdoors".

Narrower I.F. filtering in the transceivers may have been an advantage as would the



Mark EI6GUB, Ger EI6DP and Gerry EI8DRB at the Galway station

use of band pass filtering to reduce the break in from the second rig.

The use of Heil Headsets with the foot-switch made operating very easy leaving hands free for the computer logging.

BHI DSP speakers, with a headphone jack, pulled many weaker stations out of the noise.

The use of a linear amplifier would be of benefit for future operations as many of the higher powered stations tended to close in and try to move our weaker signal off frequency. Undoubtedly this would then introduce problems with two stations operating side by side.

From a group point of view, this activity was a golden opportunity to get everyone together to think the problems through and come up with ideas and alternative solutions.

From an operating point of view, this was a golden opportunity to sharpen skills towards contest operation in the future. Perhaps the rather long call-sign was a bit of a mouthful but it did generate plenty of interest on the bands.

Approximately 1,600 stations were contacted over the three weekends. Some notable countries were Barbados, Tonga, the US and Canada with many Eastern European stations worked such as the Ukraine, Russia and Kazakhstan amongst others.

We were not out to work DX and were happy enough with anywhere that call in to us.

Special thanks to all of the operators: Gerry EI8DRB, Joe EI3IX, Steve EI5DD, Enda EI3IS, Ger EI6DP, Mark EI6GUB, Arthur EI7GMB, Tryg EI7CLB and Tom EI2GP who took part and made this operation a success.

It was our pleasure to support the cause of Lifeboat personnel, who gave us the use their premises and facilities to set up station and operate over the three weekends of November and we look forward to organising a similar operation in future.

Members Advertisements

For Sale:

Icom IC 48e UHF FM Transceiver -
430 to 440MHz 25w/5w €160.00
Realistic Base Scanner Pro. 2021.
..... €110.00
Hand Held Scanner - Realistic Pro 43
..... €90.00
CB/10 metres Cobra 148 GTL-DX
..... €120.00
Yaesu Monitor Scope Yaesu VO 301
..... €100.00
50 MHz Vertical Aerial €50.00
Michael EI5DCB 086-0693873.

New secondary allocations for Norwegian radio amateurs

As of November 6th 2009 the updated
amateur radio licensing regulations in
Norway went into force.

The following new allocations were
made available to all Norwegian radio
amateurs (in addition to the 135,7 -
137,8 kHz and the 7,1 - 7,2 MHz
bands):

LF:

493 - 510 kHz on secondary basis,
100w, A1A (CW) only.

HF:

5260 - 5410 kHz on secondary basis, all
modes (6 kHz max bandwidth) 24740-
24890 kHz on secondary basis, 1kW (6
kHz max bandwidth)

VHF

70,0625-70,0875 MHz on secondary
basis, 100 W, max bandwidth 16 kHz.

70,1375-70,1875 MHz on secondary
basis, 100 W, max bandwidth 16 kHz

70,2625-70,3125 MHz on secondary
basis, 100 W, max bandwidth 16 kHz

70,3625-70,3875 MHz on secondary
basis, 100 W, max bandwidth 16 kHz

70,4125-70,4625 MHz on secondary
basis, 100 W, max bandwidth 16 kHz.

There are some minor adjustments at
SHF and EHF.

Updated PC-ALE now available

The latest version of the HF Automatic
Link Establishment software PC-ALE
is now available.

The latest version of this popular digital
mode software can now be downloaded
from the website of N2CKH.
www.n2ckh.com

Irish Radio Transmitters Society Annual Dinner & General Meeting Weekend 2010

Hosted by
Dundalk Amateur Radio Society

April 24/25th 2010

**Fairways Hotel and Leisure Complex
Dublin Road, Dundalk, Co. Louth.**

Room Bookings:-

Tel: 042-9321500. ask for Lynn.

Email:- info@fairways.ie Att. Lynn

Fax:- 042-9323698 Att. Lynn

www.fairways.ie

**Annual Dinner Saturday Evening
Annual General Meeting Sunday 1430
Rally opening at 1030 Sunday**

Booking for traders tables & dinner tickets:

Thos EI2JD: chairman@ei7dar.com or 087-2953256

Peter EI4HX: secretary@ei7dar.com

Irish Radio Transmitters Society

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Lough Erne ARC Annual Rally Sunday 11th April 2010

**The Share Holiday Village,
Lisnaskea,
Co. Fermanagh BT92 0EQ**

Details from Iain on 028 66326693,
Email: gibbjgbb@aol.com
www.lougherneradioclub.co.uk

Lagan Valley ARS Radio Rally Saturday 20th March 2010

**Village Centre,
Hillsborough, Co. Down
BT26 6AR.**

Information from
Jim Henry, G10DVU
048 926 62270

Contest Calendar

All Times UTC

December 2009

18	Fri 2100 - Fri 2300	Russian Top Band Contest	
19	Sat 0001 - 2359	OK DX RTTY Contest	RTTY
19-20	Sat 1400 - Sun 1400	Croatian CW Contest	CW
26	Sat 0000 - 2359	RAC Canadian Winter Contest	CW/Phone
26-27	Sat 1500 - Sun 1500	Stew Perry Top Band Challenge	CW

January 2010

2-3	Sat 1800 - Sun 2400	ARRL RTTY Roundup	
2-3	Sat 2000 - Sun 0700	EUCW 160m Contest	
9-10	Sat 0000 - Sun 2400	Hunting Lions in the Air Contest	
16	Sat 0000 - Sat 0600	LZ Open Contest	
16-17	Sat 1200 - Sat 1200	Hungarian DX Contest	
23-24	Sat 1200 - Sat 1200	BARTG RTTY Sprint	
29-31	Fri 2200 - Sun 2159	CQ 160-Meter Contest	CW
30-31	Sat 0600 - Sun 1800	REF Contest	CW
30-31	Sat 1300 - Sun 1300	UBA DX Contest	SSB

February 2010

6-7	Sat 0001 - Sun 2359	10-10 Int. Winter Contest	SSB
6-7	Sat 1800 - Sun 1759	Mexico RTTY International Contest	RTTY
13-14	Sat 0000 - Sun 2400	CQ WW RTTY WPX Contest	RTTY
13-14	Sat 1200 - Sun 1200	Dutch PACC Contest	
20-21	Sat 0000 - Sun 2400	ARRL Inter. DX Contest	CW
26-28	Fri 2200 - Sun 2159	CQ 160-Meter Contest	SSB
27-28	Sat 0600 - Sun 1800	REF Contest	SSB
27-28	Sat 1300 - Sun 1300	UBA DX Contest	CW
28	Sun 0900 - Sun 1700	High Speed Club CW Contest	CW

For details of smaller contests and links to contest rules and results try the following:

WA7BNM Contest Calendar <http://www.hornucopia.com/contestcal/>
 SM3CER Contest Service <http://www.sk3bg.se/contest/>

Radio News Deadline Noon on Thursdays

**News Editor
Charlie Carolan EI8JB**

**Input for the radio news should
be sent via e-mail to:**

charlie.carolan@gmail.com.

or newsteam@irts.ie

or by phone to 087-6265418

Theory Classes in Region 4

Plans are being put in place to run radio theory classes in the Limerick area by IRTS Region 4 representative Ger McNamara EI4GXB.

Depending on sufficient numbers it is hoped that the theory examination can be held in Limerick which will be dependant on numbers.

Those interested in attending the theory classes can contact Ger via email at ei4gxb@gmail.com or 087 2532512 or

JBT Trading

MI0JBT Jim Bob Traynor, Limavady, Northern Ireland

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Tel/Fax: 028 77765045 Mobile: 0774 0721770 Email: jimbobtraynor@utvinternet.co.uk
www.mi0jbt.com

Used Price List (£Stg)

Kenwood TS-870S, Mint, Boxed with Manual,
Microphone and Power Lead £799.00
Yaesu FT-2600M, Good condition,
Manual, Power Lead & Microphone £75.00
Yaesu, FT-2800M, Good condition,
Manual, Power Lead & Microphone £95.00
Yaesu FT77, Used, Boxed etc. £195.00
Yaesu FT-840, Clean, Manual etc. FM Board fitted £325.00
Yaesu FT-897D, Mint, Boxed with Manual,
Microphone and Power Lead £475.00
Yaesu FT-225RD, Good Condition,
Manual, Power Lead & Microphone £215.00
Yaesu MD-200A8X, Mint, as new, boxed £165.00
Yaesu FT-8800R, Mint, as new.
Boxed with manual and all fittings..... £195.00
Yaesu FT1000 MK5, 200w, Mint, all filters.
Boxed, Microphone, manual, PSU & Power lead £1,400.00
Yaesu GS065. New Mast Head Bearing..... £49.50
Icom, IC-R7000, Used with Manual £399.00
Icom IC-7400, Very clean, Boxed, manual etc..... £799.00
Icom IC-7000, Very clean, Boxed,
Manual, Power lead, microphone etc. £725.00
Icom IC-706MKII, Clean, Manual, Power lead etc. £425.00
Icom IC 706 MKIIG, Very clean,
Manual, boxed, Power lead, microphone etc..... £550.00
Watson Frequency Finder.
New, Hunter Frequency Finder, £59.00
Watson FC130 New Frequency Finder £79.00

Special Offer

New Icom SM20 Desk Microphone £155.00

New Radio Stock (£Stg)

Current Price List

Yaesu - FT-7800 €189.00
Yaesu - FT-8800 €269.00
Yaesu - FT-8900R..... €299.00
Yaesu - FT-817ND €399.00
Yaesu - FT-857D €529.00
Yaesu - FT-897 €599.00
Yaesu - MMB80 - Mounting Bracket for FT897..... £15.94
Yaesu - FT-450 €529.00
Yaesu - FT-950 €899.00
Yaesu - FT-2000 €1,899.00
Yaesu - MS100ASX - Desktop Microphone £116.95
Yaesu - MD200ASX - Ultra Hi-Fi Desktop Mic..... £192.95
Yaesu - DMU-2000 - Data Management Unit..... £799.00

Icom - IC-E20S €254.00
Icom - IC-2725E €319.00
Icom - IC-706 MKIIG..... €729.00
Icom - IC-7000..... €929.00
Icom - IC-7400..... €1,330.00
Icom - SM-20 - Base Station Desk Microphone..... £144.98
Icom - SP-21 - Desktop Speaker for IC7400..... £74.99

Kenwood TM-D710E £399.00
Kenwood TM-V71E £259.00
Kenwood TS-480SAT..... £699.00
Kenwood TS-480HX £765.00
Kenwood TS-2000 £1,369.00

Seasons Greetings

to all our customers and friends

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087-2513772**

Used Equipment

All prices for straight sales

Alinco DJG7E Tri band handheld, 2m/70cm/1.2GHz	€349.00
Antron 99 Fibreglass Base Antenna, 10/12m	€89.00
AOR 3000A 0-2036 MHz, 400 memories. All Mode	€99.00
AOR 7030 Award winning Rx. 0-30MHz Boxed/mint	€99.00
AOR-8200 Mk2, 0-260-0 MHz. All mode handheld	€249.00
Garmin Quest Handheld GPS. Ireland & Europe	€99.00
Heil Classic Base Microphone. Top class mic. Boxed as new	€179.00
ICE 92D True Dual Band Handheld with D star fitted including HM175 GPS speaker mic for above with GPS receiver built in. Icom CP 19R cigar cable.	€199.00
Total price new was €29.00 now only	€199.00
Icom ICR 8500 0-2000MHz. All mode Base Receiver	€1,199.00
Icom AH-4, HF + 6m Auto ATU	€299.00
Icom IC PCR 1500 PC Based comms Rx 0-3,300 MHz. As new	€79.00
Icom ICR-10 0-1300MHz All mode handheld scanner	€249.00
Icom IC706 MK2. HF + 6m & 2m. Mobile	€599.00
Icom SM20 Desk Mic. As new condition	€129.00
Icom IC 706 MK2G	€649.00
Icom IC 718 - **Special Price** 100w HF Rig.	€449.00
Icom IC-7400 HF/6 & 2m. One only	€1,399.00
Icom IC-756PRO Boxed & mint	€999.00
Icom 756 PRO III Boxed, mint, one owner	€1,799.00
Icom IC-775 DSP, Deluxe 200w base station. VGC	€1,695.00
Icom IC-91E, 2m/70cm Handheld. D-Star fitted	€349.00
Icom IC-821H 2m/70cm 45/35w base multi-mode.	€799.00
Kenwood AT-50. Matching Auto Tuner for TS-50	€249.00
Kenwood TM455E 45w, 70cm multi-mode.	€199.00
Kenwood TS-2000 HF/6/2/70cm	€1,149.00
Kenwood TS-570DGE, HF rig with DSP AUTO ATU	€799.00
Kenwood TS-790 2m/70cm/23cm. All mode base stn	€899.00
Kenwood TS-850SAT, Auto ATU. Mint, Boxed	€799.00
Kenwood TS-870SAT. HF Rig DSP + Auto ATU	€1,099.00
Kenwood/Trio TS711E. 2m/25w base multimode	€349.00
Linear Amp UK. 700w 70cm Amp. Bargain	€899.00
MFJ 934 Antenna Tuner/artificial ground	€99.00
MFJ 925 Mighty Mite compact auto ATU. IC706 size. New	€225.00
Nevada TM 1000, Professional series HF ATU Hi-Power	€299.00
Realistic DX394. 0-30 MHz all mode Shortwave Receiver	€199.00
Rigblaster Plus multi mode data decoder	€149.00
Uniden UBC 780 XLT Base/Mobile 500 Channel Scanner	
25-1300MHz Trunk Tracker	€199.00
Uniden UBC 785XLT Base/Mobile 1000ch scanner 25-1300MHz	€269.00
Watson 22 Amp 0-15v PSU. Special offer - New!	€89.00
Yaesu DVS2 Digital Memory recorder for FT1000 etc	€119.00
Yaesu FC-20 Auto ATU for FT-847 etc	€275.00
Yaesu FT 450 HF/6m 100w Transceiver, Boxed, as new	€575.00
Yaesu FT-857D HF/6m/2m/70cms - All mode 100w mobile, New	€625.00
Yaesu FT-890 0-30MHz Auto ATU	€549.00
Yaesu FT-950 HF + 6m, DSP	€1,099.99
Yaesu FT-990AC with Auto ATU, Built-in PSU	€899.00



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*Thanks to all our customers for your support during the past year.
Seasons greetings to you and yours.
We look forward to being of service again during 2010.*